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ORIGINAL ARTICLES.

SOME OBSERVATIONS ON SOUTHERN CALIFORNIA.[1]

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THE State of California, the second in size in the United States, covering 155,980 square miles of territory, is usually subdivided, for convenience sake, into Northern, Central and Southern California, each portion having its well-defined characteristics not to be confounded with those of the others any more than one brother should be taken for another, simply because he bears the family name. In Southern California I spent the months of February, March and April of this year and it is of this portion that I want to say a few words, in a chatty way.

By Southern California is meant that portion of the State which lies to the south of Tehachapi Peak, or, roughly speaking, the seven southern counties of Santa Barbara, Ventura, Los Angeles, Orange, San Diego, Riverside and San Bernardino. On the Atlantic Coast this would reach from a point somewhat south of Cape Hatteras nearly to Charleston. Its boundaries, for vacation purposes, are fairly represented by Santa Barbara to the north, San Diego to the south, Redlands to the east and Catalina Island to the west. Parallel with the coast, but back from it at varying distances up to ninety miles or so, is the Coast Range which cuts the sea-coast off from the desert to the east, and at right angles with this range, and running sometimes to the very shore, are numberless spurs, making a series of valleys, but sparsely inhabited.

While there are characteristics which these places have in common and which are not to be confounded with those of portions of the State further north, they nevertheless differ from each other; for in this region we have seashore and mountain, low and high altitude, the ocean fog and the absence of that fog; so that these conditions must constantly be borne in mind. Here are the well-known places of San Diego, Coronado, Lakeside, Santa Anna, Orange, Los Angeles, Santa Catalina Island, Santa Barbara, Montecito, the Ojai Valley, Nordhoff, Pasadena, San Bernardino, Redlands, Riverside, Mentone, Colton, Strawberry Valley, etc., while Monterey, Santa Cruz, San Jose, and San Francisco lie farther to the north and are in Central and not Southern California.

It so happened that our journey was made in a snow-storm, and icicles hung to the car windows; this emphasized to us the fact that from first to last we did not see snow in Southern California, except occasionally on the distant mountain peaks. The ice on the tables was manufactured and most of the houses are supplied with "cool rooms," rather than refrigerators. On the other hand, but little provision is made for fires. The hotels have steam heat here and there, to take the chill off of the air when necessary, but coal is brought from a distance at a considerable cost, and a few sticks of cottonwood are harbored almost as an easterner would cherish hickory. At times a blazing hearth is cheering, and is welcomed when met.

The foliage, too, struck me as being different from that to which we are accustomed. It was the winter season and the green trees were of the evergreen variety—cypress, palm, pepper, eucalyptus, rarely a pine; live oak, magnolia, orange, lemon and olive there were of course, and groves of these trees are on all sides in this southern country. I saw none of these as we went further north. The elms, maples, oaks, chestnuts and spruce were absent, though I did run across some beeches high up in the cañons, and now and then I saw a drooping willow. The mistletoe in large clusters, generally on sycamore trees, was not an unusual sight.

The bird-life was novel and interesting. The mocking-bird, singing away from some thick tree or chimney-top, the wild canary, the linnet, the quail and, most of all, the meadow-lark, made music. It seemed odd to have the lark pouring forth his melodious strains from the top of a post on the one side, while the surf was breaking on the beach on which we were walking and the snipe were scurrying before the incoming wave, and all this in early February, when we could see snow on the distant mountains.

And who can speak of this country and neglect to mention the flowers? One thinks of roses blooming on all sides in the open air in midwinter in California, but he will not soon forget the luxuriant growth of the gold of ophir roses, trailing over the very roofs of the cottages, or, with their companion, the cherokee, making an impenetrable hedge for hundreds of feet; nor the paths bordered by marguerites and calla lilies. And as for the orange groves, with their trees weighted down with fruit and at the same time white with blossoms, and the air heavy with fragrance, the experience is a never-to-be-forgotten one. As one invariably associates some particular brookside with the trout, or Duluth with the planked whitefish, or lower Cape Cod with the broiled bluefish steak, or Digby, Nova Scotia, with fried herring, and each particular food never tastes so good anywhere else, so one can never, I think, wander amongst a grove of orange trees and pick up from under one of them a Wash-

[1] Read at the meeting of the American Climatological Association, 1901.

ington navel that has just fallen, so ripe that it is thrown down by the wind, as juicy as any watermelon, dripping as it is peeled by the fingers (without a knife) and as sweet as sugar—one cannot have such an experience, I think, and not put a pin in it to fasten it there and make it one of the events of one's life. One may eat the best oranges the market can produce, surrounded by all the comforts and luxuries of club life, spotless table-linen, delicate china, polished silver, steel and glass, noiseless carpets, and attentive servants, but he will still sigh for the hillside, the view, the carolling of birds, the breeze, the perfume, the sunshine, the luscious and juicy fruit and that orange grove.

This country is full of seeming contradictions, and by the side of this cultivation may be rough fields or tall growths of cacti or what looks like waste land, acres upon acres of waving grain, bordered by barren fields, or even by marshy lagoons. Like a pretty girl, she pouts and smiles with the same lips, but she is always beautiful. There are the same reds and browns as in the landscape of Colorado, but it is not so rugged and the effects of rocks and boulders is lacking. In fact, were a comparison to be made between two things so alike in some respects and unlike in others, it might be said that Colorado is stimulating, while California (*i. e.*, the southern portion) is soothing. The soil is porous and dries rapidly, and dust is on the clothes and shoes and follows the carriage wheels.

The towns are furnished with abundant water supplies of clear mountain water, and the lay of the land makes fine drainage, which in many instances is into the ocean. While dryness is the prevailing impression, I recall a wet and nasty day spent in Los Angeles, in the very first of February. I think of down-pourings of rain and puddles at Coronado at the same time, of washouts and delayed trains, etc., but I also think that when the clouds did roll by, and the sun did come out, which was about the middle of the month, it came out to stay, and I cannot recall having had to use my umbrella in Southern California after that.

This leads one to speak of the rainy season for which California is famous and which, to quote from a writer on Southern California, "usually begins in November, though slight showers may have occurred in October, and it lasts until about the middle of April."[1] From the same writer, a former member of this Association, William A. Edwards, M.D., in "Two Health Seekers in Southern California," we learn that an average of twenty-four years puts the total annual rainfall at 10.23 inches, of which 8.75 inches fell in the four months of December, January, February and March. But then there are the fogs, which come rolling in from the sea in great banks, and may totally obscure the sun until late in the day. Sometimes they obscure it all day long. I have frequently seen the trees drip, drip, drip, as though from a shower, and all from a fog or a heavy dew. In the morning the asphalt on the streets is often black as though from a rain, but really due to fog or dew; and the moon may shine clearly and the pillars of the veranda be wet from the same cause. One needs wraps at night, and sitting out of doors is almost out of the question. I am speaking now of the seashore and of the winter and spring months.

A comparison shows that this climate, which is a dry seashore climate, has a high relative humidity as compared with that of Colorado, and that its absolute humidity is, in the winter and spring months, about two and one-half times as great. This is worthy of consideration, especially in relation to pulmonary disease, and personally I should expect better results in persons in the early stage of this trouble, and of recuperative power, in the drier mountainous regions than at the sea level of Southern California, even if the climate is less rigorous than that of most places along the Atlantic seaboard, or vastly drier than Florida and around the Gulf.

It has been well said, with reference to quite another subject, "They reckon ill who leave me out," and so the man who leaves out of the consideration of this climate its fogs, which do exist, which are cold and nasty and depressing to mind and body alike, does not reckon aright. While this is preëminently a region of sunshine, one may lose the feeling of buoyancy and exhilaration experienced in the Rocky Mountains, especially in the early morning, caused by a clear sun, a blue sky and warm air—all because of the fog.

But equability is the keynote to the climate of Southern California. The writer above quoted, says: "There is little seasonable change in the extreme southern part of the State. . . . We do have cold days. We also have those that are altogether too warm for pleasure and comfort. But we almost never have sufficient cold to injure or kill the most delicate vegetation, nor, on the other hand, is the heat ever prostrating or dangerous to the individual or his animals."

For my own part, I was wont to walk in a golf suit, and frequently the perspiration would stream off of me in drops, as on the Maine coast in summer, and I would see shirtwaists and fur boas, straw hats and Derbys in the same crowd. The Marine Band from the U. S. S. "Iowa" would give open-air concerts in February, and the crowd of several hundreds would sit or stand around or even lie on the grass, in perfect comfort, and listen to the music for an hour and a half, from three to four-thirty in the afternoon. Notwithstanding this, it was advisable to have an overcoat at hand and to be in the house in the evening. This was at sea-level. I found the mountain region somewhat drier, but there, too, the same rule held, though not so forcibly.

The daily motion of wind is slight and at the seashore did not interfere with plans. Higher up in the mountains, I experienced several dust storms that would have done credit to a region

[1] In February of this year the rainfall was 4.77 in. as against an average of 2.05 in., while the four or five seasons preceding were so dry as almost to dry up the orange crops, and in March there were only two cloudy days.

severely criticised on their account; and a housekeeper at Redlands complained of the difficulty of keeping the house clean.

To sum up, my strongest impression is of sunshine, a dry soil and mild temperatures. I found this a land of contrasts, novel and interesting, but of contrasts just the same. Orange blossoms and ripe fruit on the same tree. The place, the country, and the atmosphere were pacific and soothing; some found them enervating. People from Colorado came to California for relaxation, while, on the other hand, some went from California to Colorado for invigoration. Equally with the surrounding atmosphere, the social tone would vary from the crowd on pleasure bent to one of simplicity and refined retirement. One lived in flannels all day long, and fished, hunted, rode horseback or played golf, or he sat listlessly around and gaped at the crowd, composed of statesmen, diplomats, admirals, generals, handsomely dressed women, wealthy men—just as the spirit moved. One man remarked: "I thought we had to go to the Riviera to find this."

There seem to be two distinct seasons in the hotel-life of California. In the winter comes the tourist from the East; in the summer, the migration of the Californian himself; and I am very generally told that the summer is the choice season.

The distance intervening between the Atlantic and the Pacific Oceans seems appalling to many. But some of our best railroads run into Chicago and from that place to Los Angeles is less than three days of travel, which may be spent in a sumptuously appointed train that, in elegance and comfort, will bear a favorable comparison with those farther east.

EXAMINATION OF THE MOUTH IN INFANCY CHILDHOOD.

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THE more one examines infants and children, the more deeply does he become impressed with the importance of a thorough and systematic inspection of the mouths of these little patients. To those mainly accustomed to adult oroscopy, it may seem that this examination is a very simple procedure and that a superficial look, as it were, is all that is required. Such is not the case, however, as those identified with pediatrics can testify.

In the first place, examination must be conducted not only without the aid of the patient, but in most instances much against their will and inclination; and, secondly, the mouths of infants and young children present a picture so different from that of the adult that many normal or harmless features will appear as pathological lesions to one not familiar with their examination. For example, not only are the lateral surfaces of the hard palate very much paler in infancy, but in many instances the lips appear to be composed of two parts separated by a sharp line of demarcation, that is, an inner or bluish and an outer or reddish part. I have had both of these normal conditions referred to me for question as to their specific character.

Again, congenital peculiarities of a perfectly harmless nature may cause unnecessary alarm and interference, for instance, the case in Prof. Filatow's family,[1] in which a congenital, irregular grayish patch on the fauces was diagnosticated as diphtheria. In several instances, I have observed enlarged follicles of a congenital nature on the tonsils, which might have been mistaken for membranous deposits.

For a thorough inspection of the mouth in infants and children three conditions are absolutely necessary, namely, good position, good light, and a good tongue depressor.

A great deal of unnecessary exertion on the part of the patient, mother, and physician, is often wasted in attempts to "hold the child down" in unnatural positions. Not only do these render examination difficult and imperfect, but they endanger the mouth by forcible examination, which, as Jacobi has pointed out, is above all to be avoided in diphtheria; in this condition alarming collapse and even death having followed such manipulation.

The ideal position is to have the back of the child rest against the mother's right breast, its head against her shoulder, her left hand holding the child's knees, her right its hands. The left index finger and thumb of the physician are placed on the infant's temporal region and with the palm the head is held firmly against the mother's shoulder. It is surprising to see how rarely such a simple procedure is adopted and how frequently physicians will resort to all kinds of positions for examination.

Without good light nothing can be accomplished. Direct daylight thrown into the mouth answers every purpose; shadows are to be avoided, hence daylight from one direction must be used. In dispensary practice I have often found subdued light more satisfactory than bright sunlight. In exceptional instances a forehead reflector with daylight or artificial light may be necessary; the latter is preferable because not so diffuse, even though the former retains the natural color of the parts more clearly. The forehead reflector is far superior in my opinion to the hand mirror, since it fulfills every indication of the latter and at the same time leaves the hands free for operative or medicinal intervention.

At night it is always wise to examine with a forehead reflector or an especially constructed pocket electric lamp. Unfortunately the lamp requires constant care, for the cells need frequent replenishing and the light is often out of order when required most. For that reason I prefer the forehead reflector with candle or gaslight, or, if possible, the Welsbach.

The third requisite is an efficient tongue depressor. What constitutes a good tongue de-

[1] C. Herrman, N. Y. Medical Journal, Jan. 10, 1901.

pressor will depend greatly upon the personal equation. In private practice, conditions vary from dispensary work and hence must be considered separately. Broadly speaking, tongue spatulæ may be grouped into those with and those without a handle. Among the latter the ordinary tea- and tablespoon or the wooden slips, as used by the New York Board of Health, are the most convenient. The great advantage of these is that they are used for one patient only and then immediately boiled or burned. These advantages are more than counterbalanced, it seems to me, by their lack of firmness and the impossibility in numerous cases of obtaining a proper *point d'appui;* the wooden spatulæ, being of various sizes, are uncertain and the spoon does not always admit of firm pressure, for the resistance which some infants offer to the depression of their tongues can only be appreciated by those who have experienced it.

I have used the spatula with a handle in dispensary practice and have found it most serviceable. Chapin's tongue depressor has served me well, particularly when I desired a very thorough inspection of the pharynx and tonsils; in fact, with it, inspection of the anterior surface of the epiglottis is frequently a simple matter, especially in very young children. Like all other tongue depressors, however, it has failed me when I desired a thorough examination of the under surface of the tongue and floor of the mouth, and particularly in "nicking" instances of tongue tie. True, the wide end of a grooved director would apply, but it occurred to me that a combination of depressor and director, so to speak, would answer every purpose, especially where some sixty to one hundred or more children were examined daily. Accordingly, Messrs. Tiemann & Co. have perfected for me an instrument which I have used, mostly in dispensary work, with great satisfaction and which I present for consideration and trial.

It consists (see Fig.) of two blades connected by a hinge joint which permits of its being folded. The smaller blade measures 3½ inches in length and ½ inch in width at its broadest part; the larger blade measures 3⅞ inches in length and ⅞ inch at its broadest part. The depressor is made of nickel plated steel, is highly polished, easily manipulated, light in weight and portable.

It combines the advantages of a tongue depressor and the broad end of a grooved director and is designed mainly for the examination of the mouth in infancy and childhood. It is modeled in part after the Chapin instrument in that the end is somewhat dipped in order to pull the tongue downward and forward; it is notched in order to grasp the frenum and admit of a thorough inspection of the sublingual region and floor of the mouth, as well as for "nicking" the frenum in tongue tie. Many lesions otherwise overlooked—sublingual ulcers, aphthæ, dilatation of the sublingual veins, small nævi, cysts, adherent frenum, etc.—are recognized with the aid of this instrument. Any frenum is brought within its grasp, the longer and thinner ones far more readily than the shorter and thicker ones. The smooth edges prevent any discomfort or injury and the end is sufficiently thin and narrow to be passed along the lower alveolar border to the pharynx—an important requisite in obstreperous children. The larger end may be found efficacious in cases of so-called uncontrollable tongue in later childhood or the adult.

No oroscopic examination to my mind is complete without a thorough inspection of the under surface of the tongue and floor of the mouth, and for this purpose an instrument after the above fashion has been found necessary in my experience.

When cutting the frenum the depressor may be held in the usual manner, or reversed with the concavity of the blade pointing toward the face.

In using the instrument, one should insert it below the tongue in the median line, when in most cases the frenum will fall within the notch; if not, a little gentle manipulation will effect the desired result. In examining the tonsils and pharynx, if

the instrument is passed far back on the tongue, the epiglottis in the vast majority of cases and the upper part of the larynx in favorable ones will be brought into view.

I am not unmindful of the fact that a criticism as to the difficulty of proper cleanliness might be raised against it, as against all other metallic instruments; in my dispensary work, however, three instruments are at my disposal; these are kept in Thiersch's solution (double strength) flavored with a few drops of the oil of anise. When the depressor is used in diphtheria, scarlet fever, whooping-cough, measles or in suspicious cases, it is immediately sterilized. In private practice sterilization by boiling is but a question of a few minutes and is readily carried out.

Position, light, and depressor being ready, examination is begun. If the child cries and opens its mouth so much the better, for the instrument is inserted at once and the cavity inspected. If difficulty is encountered in opening the mouth, the spatula is passed at the side along the lower alveolar border to the pharynx; once this is irritated the mouth will open. On account of this difficulty the depressor must not be too wide or

too thick and yet not too thin or sharp as to cause injury. It has never been found necessary to resort to closure of the nostrils, nor have we met with any child so uncontrollable as to deter examination.

It has been my experience that many physicians, certainly beginners, when examining the mouth, see nothing but the tonsils and pharynx. It seems as if these constitute for them the entire oral cavity.

A systematic examination of the mouth must be conducted to my mind as follows: The depressor is inserted at the left angle of the mouth, the cheek and lips everted, then at the right angle, and the cheek and lips everted. The spatula then catches the frenum and the under surface of the tongue, the frenum and the floor of the mouth are observed; the spatula being removed the upper surface of the tongue is viewed; the latter is then firmly depressed and the hard and soft palates, fauces, tonsils, pharynx, and in the vast majority of cases the epiglottis are observed.

A complete inspection, then, embraces four views, namely, (1) cheeks, lips and gums, (2) under surface of the tongue and floor of the mouth, (3) upper surface of the tongue, (4) hard and soft palates, fauces, tonsils, pharynx and epiglottis. The first step—eversion of the cheeks and lips—being the least disagreeable, gains the confidence of the patient for the more uncomfortable examination of the tonsils and pharynx.

The very first step may give us information as to the presence of catarrhal, aphthous, parasitic, ulcerative, or gangrenous stomatitis; epithelial pearls, Koplik's spots, dental ulcers, progress of dentition, character of the teeth and gums (spongy or hemorrhagic), purpuric spots, molluscum epitheliale, verrucæ, anemia, cyanosis, swelling of the outlet of Steno's duct, etc.; the second step tells us of the condition of the frenum (long, short, thick, adherent or vascular), the presence of sublingual ulcers (pertussis), the condition of the sublingeal veins (dilated in sporadic cretinism), patches of stomatitis, and the general appearance of the floor of the mouth. The third step will give us information as to the color, size, and general appearance of the tongue, whether coated, clear, anemic, congested, hypertrophied, strawberry, fissured, or presenting irregular exfoliated areas (so-called ringworm of the tongue), and the final step may show us perforation, deformities, or congenital defects of the hard palate, stomatitis, purpuric spots, lesions of varicella and variola, papular eruption of measles, Epstein's pearls, Bednar's aphthæ, an elongated, short, bifid or edematous uvula, jaundice, faucitis, hypertrophied tonsils, pharyngeal inflammation, exudate or growths, retropharyngeal edema, adenitis or abscess, pharyngeal granulations (important in the diagnosis of adenoid vegetations), tonsillar inflammation or exudates, peritonsillar abscess or edema, etc.

When one is brought face to face with great numbers of children, one soon finds the need of rapid and yet thorough examination. No thorough examination can be conducted rapidly unless it be systematized. The aforesaid method has been used by me for some time and I have by this means not only been enabled to make this important examination with thorough satisfaction, but I have observed a very large variety of conditions.

At the Good Samaritan Dispensary every mouth is subjected to thorough and systematic examination, irrespective of the ailment, and it is only by methodical means that we are enabled to control a large material with justice to the patient and satisfaction to ourselves.

Unless the tongue be firmly depressed so that the tonsils roll out, many patches and ulcerations, diphtheritic and otherwise, which are situated at the lower and posterior part of the tonsil will be overlooked. This often causes the patient to gag and cough, so that it is well for the physician to protect his eyes with a pair of ordinary glasses, in cases known to be contagious or in suspected ones.

Whatever be the tongue depressor employed, let system govern the examination of the mouth, and let every portion of it be thoroughly inspected lest gross errors be committed.

1828 Madison Avenue.

A CASE OF CONCUSSION OF THE BRAIN AND HYSTERO-EPILEPSY.[1]

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THE following case has been fought out on its merits in lawyers' offices and in the courts. Those who have studied it and expressed the usual positive opinions of "medico-legal experts" are probably all agreed that several interpretations might be put upon it, varying not a little possibly from their opinions as stated on the witness stand.

The patient was a man, George A., aged thirty-five years, married. Three years ago, when employed in his occupation as a telegraph lineman, he climbed a rotten telegraph pole and fell from the height of 15 feet, striking his head. He was stunned and his scalp was severely cut. He was taken to the Staten Island Hospital and was able to go to his home in Brooklyn the next day. Of the events immediately following the accident he has had no recollection since. Epileptic fits occurred when he reached home and recurred frequently afterward. The diagnosis made a month later at Bellevue Hospital was concussion of the brain and traumatic epilepsy. To relieve his condition the operation of trephining was strongly urged and refused by the family. He was considered seriously injured. There is record of decided change in his mental condition, his wife stating that he became morose and quarrelsome.

Previous history proves that he has always been able for years to do lineman's work and had never had a fit. There was no history of alcoholic excess.

[1] Read before the Medical Association of the Greater City of New York.

He had been involved in some trouble with the police two years before his accident on account of having in his possession some wire that did not belong to him. On account of this he had served a short term at Sing-Sing.

The card of physical examination by the Bertillon system taken at that time showed that his physical development was normal, no marks on head or body. Eyesight normal, although the photograph recorded a slight squint. There is no record of any fit at Sing-Sing, although a fainting fit of some sort was claimed to have occurred at the White Plains jail before he went to Sing-Sing. This was seen by one person only.

I saw him first March 13, 1900, at his home. He was having a fit at the time. He was unconscious, breathing heavily, lying prone in bed, more or less rigid, the face red. The clonic convulsions had ceased. The eyelids opened easily, pupils not especially dilated. Mentally, he was at first unconscious; after 15 minutes, partially conscious, though confused. After his mind had become clearer, he seemed to be much fatigued mentally and physically and impatient of questions. His memory was poor. He told of his accident and subsequent illness, but was not clear in his mind as to what had happened after his fall. The fit seemed to me at the time to be a typical epileptic convulsion, but a second fit resembling the first was precipitated by pressing on a spot on the left side of his head. He could not see distinctly with his right eye, not distinguishing fingers five feet away. He complained of seeing everything red before his right eye before the fit comes on, and at the time I saw him. The motor nerves of the eye and other cranial nerves were normal. Speech was normal, after the fit was over. His extremities showed a *left* hemiplegia, during and for a while after the fit. Rigidity was not marked. There was no tremor. Knee-jerks were absent at the time. Sensation to touch and pain deficient over the entire left side, especially over upper arm and above middle of the leg. Hyperesthesia over right breast. Intense hyperesthesia over area on the left side of the head, 1½ inches above the posterior corner of the eye, near junction of temporal and parietal bone. Pressure over this spot at the close of the fit produced a new convulsion. He complained of intense pain in that region at that time and at other times, especially before a fit.

A second examination at my office gave the following data. He appeared to be a strong, healthy man, weighing about 150 lbs. and height 5 feet 8 inches; grip on dynamometer on both sides 35 pounds. There was no ataxia; the knee-jerks were present, and alike on both sides. There was also noted unsteadiness and a coarse tremor of the hands. Examination of the eyes by myself and later by Dr. Curtis Carter showed that he was suffering from an extreme concentric limitation of the visual field of both eyes. A plain glass gave him normal vision, thus establishing a diagnosis of hysterical amblyopia. Ophthalmoscopic examination was negative and refraction normal. Left arm weak and partially anesthetic. Left leg weak. Left side of his head tender over a depression existing near the junction of the frontal, parietal and temporal bone located 9 cm. from alæ nasæ; 15 cm. from occipital protuberance; 8 cm. from ear; 7 cm. from frontal bone. Slight thermalgesia. No hyperesthesia. During the year following the accident he had had occasional fits seen by various witnesses, the convulsions appearing to be of the nature of epileptic fits.

He tried to get work, but was unable to do anything continuously from his shattered physical condition. Mentally he changed much, being morose and at times acting as if insane. He suspected his wife, and left home for some months, living under an assumed name. This mental condition had improved at the time of my second examination and at the time of his trial he made a favorable impression on the spectators.

Traumatic cases of this sort are as a rule extremely puzzling, because, no matter how definitely the organic symptoms appear, the classical train of symptoms of traumatic hysteria are almost certain to be so largely in evidence that the jury and lawyers are strongly impressed with the belief that the patient in question is "faking."

With the limited knowledge of the pathology of hysteria at our command, an accurate study of the real relations between hysteria and organic disease is difficult or impossible. With a severe trauma at the starting-point the problem is still more difficult.

In concussion of the brain certain pathological events occur. A fall or blow on the head of only moderate severity may produce the following results: A brief diminution of the blood-pressure of the part, resulting in more or less mental disturbance. The cells of the cortex of the brain do not stand being deprived of their accustomed nourishment without manifesting such symptoms as a brief perversion of memory and intellect. Memory is for the time being lost and power to recognize surrounding objects is lost or weakened. The sensory portion of the cortex responds by pain and other sensory symptoms; the motor by paralysis or symptoms of reflex excitability. Marked alterations of the cerebral circulation may occur in many conditions besides direct traumatism. Simple hyperemia is not pathological. The quality of the blood in the brain is often far more important than the quantity.

Intercranial and cerebral venous pressure vary directly with the pressure of the vena cava, and only indirectly with the aortic pressure. The volume of the blood in the brain under physiological conditions is only slightly variable. Loss of muscular control and paralysis of vasoconstrictors induced by shock or exhausting disease of any sort interferes seriously with the circulation by damaging the power of compensation, thereby permitting simple gravity to become a serious element. Under such circumstances when the subject stands in an upright posture the blood drains into the great abdominal veins, the heart empties and circulation ceases for the time being.

General shock is in addition a hyperirritation of the entire sympathetic nervous system occasioned by some sudden violent impression, causing contraction of the arterioles by stimulation of the vasomotor nerves. The character of symptoms indicates deficient vasomotor supply. The brain is made anemic, with secondary dilatation of its vessels. As hyperemia becomes excessive, the brain becomes again anemic from cessation of capillary movement and from edema. The result of compression and general contusion of the brain is the same.

After recovery from the milder degrees of shock and cerebral traumatism, a subsequent instability of cerebral nutrition due to increased susceptibility of the vasomotor centers remains with liability to anemia or hyperemia. Such persons, even after the milder degrees of traumatism, may easily remain unable to endure serious mental or physical labor, exposure to the sun, moderate alcoholic stimulation, or fatigue.

It is only very transient and slight traumatism that will thus pass by with only disturbance in the vascular and vasomotor system.

In severer grades of concussion there is in addition a jostling or displacement of the cells composing the surface of the brain. In such a condition, the patient may be unconscious of all that is around him. Or there may be a contusion of a limited surface, with local or isolated paralysis or motor convulsions, local or general, which may never recur, or which may persist as chronic epilepsy. The distention of the parenchymatous vessels already referred to may result in the formation of minute thrombi, or punctate extravasations of blood. Any attempt at absorption of these and the development of new fibrous connective tissue is apt to furnish another focus of cortical irritation which in the motor region so frequently results in epilepsy.

If the condition is to remain unimproved and chronic, the following pathological changes will be found in the cortex. The nuclei of the cells of the cortex become swollen, the cytoplasm stains diffusely with Nissl's stain; varicosities, atrophy, degeneration, hypertrophy, chromatolysis, vacuolization or complete destruction of the cell may occur; or, if there has been a hemorrhage, softening of areas of the cortex and adjacent white matter may develop. These are conditions frequently described in autopsies of epilepsy cases and in certain mental diseases.

With such pathological changes in the cortex, early evidences of mental impairment are to be expected. Or the patient may remain paralyzed in motion or special senses. Dementia associated with or independent of paralysis thus may be the result of severe injuries to the brain. Any type of mental disease may develop, either of the regular acute psychoses, such as mania or melancholia, or, as is much more commonly the case, the neuro-psychoses, such as neurasthenia or hysteria, may develop.

That tendencies exist not only on the part of the individual but of the tissues themselves to form habits must not be forgotten. This is true not only in the ordinary reflex or voluntary actions but in pathological ways. A child who has once had a convulsion is far more liable than another child to repeat it, from what might be termed newly-acquired activities of motor paths and centers, in ways the normal child might never develop. The habit of choreiform twitching in later years of childhood is easily acquired and with difficulty lost. In a suggestible individual even organic disease readily recurs. In cases of cerebral traumatism one of two conditions must exist. Either the individual has been neuropathic for years and is abnormally suggestible, in which case there is no limit to the variety of strange symptoms a slight or severe traumatism may develop; or on the other hand the individual may have been through all his previous life absolutely sound in his nervous system, and the vasomotor changes and disturbances in the cortical cells already outlined, that have taken place at the time of the accident, have changed him into a neuropath with all the suggestibility of the previous case. No more potent suggestion can be made than the set of symptoms experienced in connection with an accident. Let the suggestion be presented to the mind that these symptoms must remain permanent and a full-fledged case of traumatic hysteria is developed.

The development of a fixed idea through autosuggestion or the suggestions of friends and lawyers is made a very simple matter after the initial shock and suffering of a traumatism. Apart from such a mental origin of a set of symptoms, the possibility that some definite injury to the brain has occurred, especially to the cortex and vascular system, is more than probable. In the case recorded, the marked indentation on the left side of the head which was proved to have occurred at the time of the accident, pressure on which causes pain and even epileptic convulsions, shows definitely that serious lesion of some sort had occurred. The fit seemed to be a genuine epileptic convulsion, and was followed by a post-epileptic condition of stupor and temporary hemiplegia resembling the series of exhaustion paralyses following epileptic fits described by Clarke. Mental degeneration was at times in evidence between the fits. Then come a set of symptoms which are certainly hysteria, pure and simple. Right-sided blindness due to concentric limitation of the visual field; anesthesia of entire left side of body (the injury being also left-sided) to the median line; marked hyperesthesia of the right breast; tenderness of the skin over the area of injury to head are all of a hysterical nature.

Hystero-epilepsy may mean general hysteria with hysterical convulsions, or definite epilepsy with intercurrent hysteria, or it may be a convenient term to cover up one's ignorance as to whether hysteria or epilepsy is the proper diagnosis. From a legal standpoint this is not an unimportant question, for in the minds of the majority of lawyers as well as jurymen in this city

hysteria is still held to be synonymous with simulation.

To establish a pathology for such combined cases during life and frequently even by autopsy is a difficult problem. Admitting the presence of an exhaustion paralysis of a temporary nature following an epileptic fit, and also admitting that the condition present in my case of temporary hemiplegia and in a long series of cases reported by Clarke of the Craig Colony of various other paralyses is truly the result of exhaustion, and the question arises, Why are not these complicated symptoms which we call hysteria, so closely associated with definite epileptic attacks, to be explained, also, as fatigue symptoms in a man who was originally suffering from concussion of the brain, and secondarily from epilepsy?

One condition is common to all these traumatic cases, and that is, whether or not litigation is being carried on, they have almost invariably lost the power of working continuously at any occupation, and fatigue promptly follows any exertion.

Other theories such as a loss or perversion of the mental conception of movement, derangements of inhibition, vasomotor spasm with resulting starvation of isolated areas of the brain, have all been held at times to be the causes of hysteria. General exhaustion of the cortical centers seems a much simpler explanation.

28 West 61st Street.

ON EXPERIMENTAL TUBERCULOSIS OF THE SUPRARENAL CAPSULE IN RELATION TO ADDISON'S DISEASE.

PRELIMINARY REPORT OF A PATHOLOGICAL STUDY.[1]

BY BINDO DE VECCHI, M.D.,
OF BOLOGNA, ITALY.

ALTHOUGH the number of observations on the suprarenal capsule is very large and much light has been thrown upon the structure, development and functions of this organ, its pathological importance still remains obscure, especially with relation to Addison's disease. Evidently the clinical and anatomical observations are insufficient since they do not furnish a solid foundation for the various theories advanced, nor has the aid given by experiments been able to solve the question, since the results obtained have been quite diverse and at times even contradictory. The reason for this failure may lie in the fact that experiment can never duplicate the conditions that exist in human pathology.

Extirpation of the capsules, lateral or bilateral crushing, and methods of injection of these organs into healthy or decapsulated animals, have all been done over and over again, but the method of procedure, and hence the consequences, must obviously be different in Addison's disease where the morbid process induces a gradual destruction of the organs.

Since the most frequent anatomical lesion in Addison's disease is tuberculosis of the suprarenals, I have developed experimental tuberculosis in them with a view to studying its effects on the general organism, an experiment never up to the present time attempted.

The experiments were conducted on male and female rabbits, both white and colored. The injections were made on one or both sides in one or two operations. Where no complications set in and the animals recovered from the immediate effects of the operation, life continued for from three and one-half to four months. During this time the animals lost 50 per cent. in weight, there was a slight rise in temperature and a progressive diminution of the number of red cells. Loss of appetite seemed to prevail; sometimes tremor and a paresis of the hind limbs developed and the fur appeared ruffled, but never could I observe any alteration in the color of the skin or of the mucous membranes, nor was the dystrophy of the fur, noted by other observers, ever present.

The post-mortem examination never revealed any important alteration of the bowels to which death might be attributed. The capsules were in partial or complete caseation, and by killing some of the animals at varying intervals after the injection, I was able to study the histogenesis of the capsular tubercle.

Soon after the inoculation, a granulation tissue forms along the course of the wound in which epithelioid cells do not appear and in which bacilli are scarce. Later these are more numerous and epithelioid and giant cells become evident. The medulla of the organ is soon converted into a mass of caseous detritus, while the cortical substance resists destruction for a long time. Moreover there is a vigorous development of connective tissue here so that in animals left to die the cortex is divided into numerous islands outlined by thick, fibrous bands with persistence of well-preserved, probably functionating fragments of tissue.

Examinations of the solar plexus, the splanchnic nerves and the cervical and thoracic chains of sympathetic ganglia were negative. Even the ganglia nearest the suprarenals were normal. Only in one case did I find the celiac ganglion altered by the tuberculous process which had diffused itself from the capsules to the surrounding parts. In the midst of detritus, rich in bacilli, one could observe half-dissolved cellular elements filled with droplets of fat and containing deeply altered nuclei. The process did not extend to all the cells of the ganglia, but only involved the diseased side. I add that the animals lived about three months, notwithstanding this secondary change; that it showed the same asthenia, debility and paresis as the other animals operated upon by me, but there was no pigmentation of skin nor mucous membrane.

The examination of the central nervous system in all the cases gave a most interesting result. It was impossible to find any injuries of the white

[1] From the Pathological Institute of the University of Bologna (Italy); Director, Prof. G. Martinotti.

substance, but there were grave changes in the gray matter, especially in the nerve-cells themselves, in the form of an increase of the pericellular lymphatic spaces, sometimes with the presence of corpuscles probably leucocytic in character, swelling and thorny appearance of the cells, abnormal position of the nucleus with disappearance of the chromatic network and the pseudo-nucleoli, migration of the nucleolus to the outside, advanced chromatolysis of the protoplasm, a pulverized appearance of the bodies of Nissl and broken or varicose prolongations. In the posterior part of the spinal cord the nerve-cells were found entirely changed and the pericellular and perivascular spaces were filled with red cells and leucocytes. All these lesions must, in my opinion, not be attributed to changes in the sympathetic system, but to a general intoxication with tubercle toxin.

In the other organs, such as the heart, liver and kidneys, I could determine degenerative changes. No lesions were found in the lungs, alimentary tract, pituitary gland, thyroid and ovaries.

After from fifteen to twenty days a larger number of nuclear elements were found in the blood, sometimes in a state of karyokinesis. There was also a great number of leucocytic granulations. Little by little, such elements disappeared. At about the same time the bone-marrow showed the presence of many red cells in karyokinetic division and of giant cells undergoing transformation into pigmented cells. A little later, the marrow is again of normal appearance. In the spleen, in addition to slight hyperplasia of the follicles, edema of the pulp and stasis, one meets with a strong accumulation of pigment giving the iron-reaction.

From the diminution of red cells in the blood and the activity present in the bone-marrow, one may conclude that the capsules possess hemolytic properties.

I will also mention that where only one capsule was infected no signs of compensation were evident in the other.

From this short account it is clear that by tuberculizing the suprarenals a serious poisoning of the rabbits is produced which ultimately leads to their death. The circulating poison has great destructive properties as is shown by the pathological changes in the heart, liver and kidneys and the cells of the central nervous system are particularly vulnerable. These injuries explain the nervous symptoms of those suffering from Addison's disease. I did not observe any secondary changes in the sympathetic cells and in the rabbit where the celiac ganglion was partially destroyed; I encountered no symptoms not seen in the other animals. Although I have certainly succeeded in causing an intoxication in animals by this special method, I have been unable to reproduce the characteristic bronzed skin. I will elucidate my theories of Addison's disease from the voluminous literature on the subject and my own experience at another place, and will only state here in conclusion that the cause of the diseased condition produced by me lies in the gradual destruction of suprarenal substance. To this undoubted capsular insufficiency must, however, be added the tuberculous intoxication, so that we have two factors to deal with. I think I have, by my experiments, reproduced as nearly as possible the process as it goes on in the human body and while I do not believe I have entirely settled the question, it has been brought nearer to solution and an entirely new method of research has been opened.

THE PHYSICIAN AS A SOCIAL FACTOR.[1]

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IT IS customary on introducing before an assemblage similar to the one I have the honor of addresing now a subject not of a strictly scientific nature, to beg the kind indulgence of the audience for lending its ear to an inquiry seemingly foreign to the chief aims and aspirations of a medical society. Following this custom, which we honor in its observance, I not only ask your attention, but hope to prove in the course of my remarks ample justification for engaging the same. It is sufficient for me to state at the outset that for the first time in the history of international medical congresses the subject for our consideration this evening was recognized as one of such prominence and importance that a whole session of the last Congress at Paris was exclusively devoted to the deliberation of propositions touching upon the mutual relations among the members of the profession and the relation of the profession as a whole to the community, in the midst of which lies its field of activity.[2]

We have occupied ourselves, almost at all our gatherings, frequently to the total exclusion or neglect of routine business, with scientific papers, communications, and clinical demonstrations. These have all been of high merit and of inestimable value to the average practitioner, whose daily laborious routine in the midst of conditions unfavorable to the cultivation of scientific research makes it difficult for him to follow even at long range the rapid progress that is being made in every branch of the great healing art.

The subject, of what is somewhat loosely denominated as medical ethics, has also claimed a goodly share of our consideration, and is destined at no distant future to absorb even more of our attention than it does now.

It occurred to me, however, that we have unduly neglected a subject of utmost importance, one that forces itself, I may say, almost daily on our notice, and which certain occurrences of recent date have made particularly prominent; I allude to the relations between the medical pro-

[1] Read before the Eastern Medical Society, May 10, 1901.
[2] Congrès International de Médecine Professionelle et d'Odontologie Médicale, publié par les soins de M. le Docteur Jules Glover, Paris, 1900.

fession and the community at large, to the rôle of the physician as a social factor. In our self-glorifications over the scientific triumphs achieved by our art and the unbounded enthusiasm that attends every recital of these triumphs, the question of the physician's standing as a factor in the community, of which, we are told, he forms so important a part, has been but lightly and superficially touched. It is only within the recollection of the younger members of the profession that such paramount issues—equally important to the community at large as well as to the profession—as the various medical abuses, the licensing of practising physicians, the hospital and dispensary defects, contract and medical insurance practice, etc., etc., were made questions important enough to be treated outside of the narrow pale of purely professional circles, and legislative aid was invoked on the principle of *salus populi*, the common weal.

Whence comes it that not a single physician's name was adjudged worthy of being inscribed on the portals of the Hall of Fame? The pages of the Colonial as well as the post-revolutionary history of the United States are replete with brilliant names of medical men who took an active part in the affairs, not only of the immediate community, but of the State and Union. To mention but a few,[3] as far back as 1647, we find, in the council of Governor-General Kieft, Dr. John de la Montague, a man of great intelligence and decision of character, a Protestant refugee from France. We find that the Colonists waged war against the Indians under the command of the indefatigable De la Montague, who later signed the treaty of peace with them. Dr. Cadwallader Colden (1688-1776) was "the most conspicuous physician of the eighteenth century." He was made first surveyer-general of the colonies by Governor Hunter; was in direct correspondence with Linnæus, wrote on yellow fever, compiled a history of the Five Indian Nations of Canada, and was a pronounced authority on botany. His intellectual capacities and attainments were great and varied, and he is spoken of by one of his biographers as "known in the scientific and literary world as a physician, botanist, astronomer, and historian."

Among the fifty-six delegates present July 4, 1776, at the signing of the Declaration of Independence, five were physicians, the most prominent of whom was Benjamin Rush, a graduate of Princeton when fifteen years old, professor of chemistry in the College of Philadelphia when twenty-four years of age. He was surgeon-general of the hospitals during the war, and for the last fourteen years of his life treasurer of the United States Mint.

We pass in rapid succession men like Latham Mitchell (1764-1831), a physician, chemist, botanist, and astronomer, the "Nestor of American Science;" David Hosack (1769-1835); John W. Draper (1811-1882), "chemist, physiologist, a many-sided man," especially known as the author of the "Intellectual Development of Europe," "The Conflict Between Religion and Science," etc.; Dr. Valentine Mott (1785-1865), who is said to have tied more arteries for the relief or cure of surgical diseases than any other surgeon; Dr. Samuel Gross (1805-1884); Dr. R. H. Gilbert, the inventor of the elevated railroad (1832-1885), and O. W. Holmes, whom American Medicine claims as much as American poetry; even if we omit men like Morton, though a dentist, Marion Sims, Bigelow and others. And out of this array of men not one was found worthy of honor! Were all these men in their individual or collective activity of less value to the nation than some of our poets, statesmen, or inventors? What truly painful spectacle to witness the inability of a profession that counts among its members many able and intelligent citizens, to cause the enforcement of the existing law against such charlatans as the Christian scientists, "that pestilential aggregation of ignorant fanaticism and unscrupulous fraud," the absurdity and dishonesty of whose methods in dealing with their dupes are evident to a mere tyro. Where are we to look for the causes of such failures? Surely not in our small numbers, for numerically we exceed by far the other liberal professions in this country, and, as compared with other countries, we have proportionately twice as many physicians as Canada, three times as many as England, four times as many as France, five times as many as Germany, and eight times as many as Russia. The average ratio is one physician to 500 inhabitants, but in some States it is as low as one to 350, or even less. In fact, so large is the number and so rapid its increase, that we are dangerously near that condition of affairs which a certain Minister of France—I believe it was Richelieu—threatened to bring about—by creating so many dukes, that it would be a shame not to be a duke, and no honor to be one.

The causes lie first of all in the indifference and apathy of a disunited profession, in the almost total absence of that *esprit de corps*, that co-operation of activity, which is the only means of establishing a firm foothold in the public estimation. The reason for this is again to be found in the remarkable heterogeneity of the elements, not to be found anywhere else in the world, that go to make up the profession here—that great difference in the education and intellectual acquirements of the rank and file of the profession which form the chief obstacle to a full understanding of the aims and aspirations of medicine, in the widest sense of the term, and for which our lamentably-defective medical institutions bear the lion's share of blame. Notwithstanding the undeniable reforms which are taking place in the education of the physicians of to-day and which tend to equalize, as far as it is possible to do so with human beings possessing free will and reasoning faculties, the intellectual standard of the graduate, we are still very far from that consummation devoutly to be wished, when an intelligent and

[3] Dr. W. L. Stowell, "The Doctor Outside of Medicine," N. Y. Med. Jour., Vol. LXIX., No. 22.

respected profession will be able to present a firm, united stand against the encroachments by the numerous quacks into public confidence. We are, indeed, far from such a millennium if, with all our reforms in medical education, justifiable complaints can be heard from well-known medical educators connected with one of the best medical institutions of the country. Thus, speaking of the various branches advantageous to him who intends to study medicine, Prof. F. S. Lee says: "Of these branches, be they few or many, to no one should be given more prominence than to the subject of English—the ability to appreciate, to speak, to write, to understand, good English. The longer becomes one's experience the more vital does this seem, and it is impressed upon one the more because of the serious lack of this ability among American youth, be they college-bred or only school-bred. The despairing cry of the college examiner, "Give me English, or give me death!" finds an answering echo in the breast of every examiner in the medical schools. The examination papers of even those who are graduates of the colleges, and even of those colleges that, recognizing the need of which I write, make the study of English especially prominent, too often teem with grammatical errors and rhetorical crudities. Even the ability to make a plain statement of facts in simple language is frequently absent, and style and literary sense are conspicuous by their rarity. In these days of the wonderful growth of the science and art of medicine, when every physician feels that he must write his book or his occasional article for the journal, and medical literature is increasing in bulk at an alarming rate, the necessity of being able to write according to the accepted canons of good literary taste is evident; and an examination of the medical literature of the day makes equally evident the fact that, in spite of many exceptions, good literary taste there is sadly wanting. This lack should not be laid at the door of the physician himself, but at the door of those who are responsible for his preliminary education. I would not attempt to say where in the course of his education, or how, the desired betterment should come in. That it should be introduced in his youth is obvious, though I sometimes feel that no more effective improvement could be made in our medical schools than the addition to their faculties of chairs of English."

Again, Prof. J. G. Curtis says: "The third deficiency—a crying one—is an insufficient knowledge of the English language, not in its higher flights, but in its plain, necessary everyday aspect. From this last deficiency, alas, not even Bachelors of Arts of the best colleges in the United States are invariably free."[4]

However, in this respect we occupy no unique position, for both our theological seminaries and our laws schools need as much mending, if not more, as the medical schools. Although neither of these professions can claim a greater aggregate of wisdom and intellect than that possessed by the medical profession as a whole, they enjoy a greater share of the public's esteem and wield, as social factors, a far greater power than the physicians in spite of the fact that the latter come in closer contact with the community and their scope of activity is wider than that of either the theologians or the lawyers, for, as some one remarked wisely, there are many who have no property to be cared for, and some with regard to whose possession of soul there may be a question, but everybody has a body which is at times liable to require skilled management to avoid suffering and death, and enable it to do its work; although some bodies, it must be confessed, are hardly worth preserving.

We live in an age of commercialism, and its blighting and corrupting influences have invaded all the ranks of the profession; for as an organic part of the social system it could not escape the tendencies of the age; this is especially true of America where the commercial instinct is so strongly developed as to impart its tincture to every phase of social life. Thus the average physician considers his profession first of all as a business venture, and, surrounded by the intense competition with his own confrères, with the hospitals, dispensaries, contract and insurance physicians, besides the numerous classes of various quacks, the scientific side of medicine is gradually lost sight of, and the great science is converted into a trade. Like the poor, we always have the "hustler" among us, the man who spares no effort, strains every energy of mind and body, for the undeviating devotion to the one aim in view—the pursuit of gain.

Alas! It is very unfortunate and detrimental to the profession as a whole, as regards its standing in the community, that this hustler does not at times hesitate to cast aside self-respect and, in his tenacity of purpose, resorts to means that are dangerously near to dishonest; and though the average man will readily acquiesce in and accept as a matter of fact the predominating influence of commercialism in any other professional pursuit, he is traditionally unwilling to acknowledge it in the physician, and looks askance at any manifestation of this tendency in his doctor.

Were we to pursue a parallel between the medical and the other two most important of the liberal professions, we could hardly attribute any special freedom from commercialism to the rank and file of our professional brethren-in-law, the members of the legal profession. The gentlemen of "the sacred calling," even though not so proficient in purely commercial matters, are nevertheless far from being free from the domination of the sensational instinct, and in them in whom decorum is next to godliness this feature is especially objectionable; the invasion of the houses of vice under the pretext of catching the beast in its lair, the discourses from the pulpit frequently laden with personalities and "invectives which might put to blush the veriest scold," the

[4] Columbia University Quarterly, March, 1901.

public indorsement of quacks and their pernicious products, are but few of the many methods adopted by the gentlemen of the cloth for springing into notoriety, into the glare of public notice. It is, however, true that,[5] "As far as the profane may judge, those disposed to doubtful paths in the pursuit of fame and fortune are but few and they have not gained the approval of the body of their fellows; but those of us who march well to the front beneath the Æsculapian banner and fight upon the frontier of professional propriety are many, and have been honored with the proverbial flattery of widespread imitation." And still can it be denied that either of the two professions of theology and law has a stronger hold on public esteem and affection than the one enjoyed by the physician? I dare say that if any question of public importance were to be propounded for solution to the representatives of the three professions, the one offered by the physician would very likely carry the least weight and importance.

To parallel the exhibition of Christian scientists in treating disease by prayer, let us imagine, in the domain of legal practice, the existence of a sect who were to decide the various differences and disputes that require resort to court or a popular vote, by what is historically known as God's judgments—those extraordinary trials by arms, single combat, by ordeal, etc., in which it was assumed that God would work a miracle to vindicate innocence and to decide what is right and what is wrong. Imagine Patrick and Jones, the famous Rice murder duet, proving their innocence in a single combat with fists and otherwise; fancy great political issues involving paramount questions touching the welfare of great commonwealths—which are but aggregations of individuals—decided in a similar manner. Fancy Mr. Roosevelt and Mr. Bryan engaged in a hand to hand combat to decide an issue on which hangs the fate of a great political party; or to come nearer home, to troubles of our own, picture to yourselves a great platform, say in Madison Square Garden, surrounded by thousands of people, on which Mr. Thomas C. Platt and Mr. Richard Croker are pounding each other most industriously—striking arguments these indeed—each whack accompanied, in the midst of incense, by loud invocations to the Almighty, from the ministers, priests and rabbis, representing all the various denominations of their respective constituents.

Now this is no laughing matter, but the incontrovertible conclusion from the chain of reasoning—alas for poor logic! What absurdities are committed in thy name!—employed by Christian scientists! What ridicule, what a howl of execration would sweep over this land if such a sect were to offer its service in a manner that is being done by the Christian scientists! Human credulity and popular ignorance are just as easily beguiled into trusting the quack and the Christian scientist, as it would be into acquiescing in the results of God's judgment; and as a matter of fact this latter procedure is synchronous in the history of civilized nations with the flourishing period of treating disease by laying on of the hands, corresponding in the history of this country to the period of Salem witchcraft, when Cotton Mather preferred this judgment to any that might be agreed to by any court of men. In many savage peoples treating disease by prayers and the reliance on the judgment of God are prevailing even into this day. Would any body of men—whether in or out of legislative halls—consider the practice of law by relying on the judgment of God in any light but that of an insane delusion, even though like Christian science, this reliance would conveniently take refuge under the cloak of religion? Whereas a similar delusion, but fraught with incomparably greater danger to the commonwealth, has been dignified into a question important enough to be brought up before various State legislatures for solution. Verily a spectacle for the gods! While ascribing to the human mind a remarkable tendency to absorb by preference whatever appears illogical, fantastical and impossible (a tendency which the great sage of Bridgeport, Conn., embodied in the trite saying, "The public likes to be humbugged"), it is not to be denied that the medical profession is to be held to a great extent responsible for the firmness with which all these humbugs take hold on the popular mind. The popularization of medical principles that can be easily made accessible to the great portion of the community is an untilled field in the medical literature of this country.

We have almost no popular works on medical subjects which would command respect of and serve as an authority to the intelligent portion of the community. Those of you who are acquainted with the medical literature of any of the European nations, and especially with the German literature, will easily comprehend how far we are outdistanced in this respect by Europe. And this virgin soil is one of the most favorable culture media for the growth and development of the various popular fallacies that can only be neutralized by the general diffusion of knowledge concerning plain every-day medical truths.

The deeper this subject is looked into the larger its scope appears and the more difficult of disentangling seem the various problems involved therein. The above is but a feeble and certainly very imperfect attempt to depict what was intended to convey to my hearers. However, cause and effect being, though necessarily incompletely, placed side by side, certain remedial agencies suggest themselves; I mean, of course, such as are within our power of application. We are unable to exert any direct influence in improving our medical schools by diminishing their number (as a curiosity let me state here that Chicago with its fourteen medical schools possesses five more than the whole of Russia, or as many as Austria, Switzerland and Denmark combined; St. Louis

[5] Dr. Charles P. Phelps, "The Medical Profession at the Close of the Nineteenth Century," N. Y. Med. Jour., Jan. 2, 1897.

is not to be outdone with her eight schools, Baltimore and Cincinnati possess six schools each, etc.), and consolidating several into one as a department of a University, thus concentrating the clinical facilities, and drawing better financial support from the University, instead of being as at present the poorest endowed of all the educational institutions in the land.

By taking a more active part in the social and political affairs of the community we shall succeed eventually in rooting out that erroneous idea, firmly implanted in the public mind, that the medical profession is always actuated by purely egoistic motives in its dealings with the community. We can influence State legislatures by either directly sending representatives or by bringing pressure to bear upon certain of them in the respective legislatures. It is perfectly astonishing how insignificant—almost non-existing—is the representation of medical men in the State legislatures and especially in Washington. Thus, in the present Fifty-sixth United States Senate there is not a single physician, although there are sixty lawyers, merchants, farmers, manufacturers, journalists, etc., etc.; while in the House of Representatives, out of a total of 357 members, there are but two—mark you, in the whole vast assembly, but two physicians—and a similar state of affairs presents itself in almost every State legislature of the land!

What wonder when questions which are considered as solved as matters of fact in Europe, such as vivisection, which are of vital importance to the pursuit of knowledge, assume here dangerous enough proportions to threaten interference with the study of medicine, and necessitate constant exertions on the part of some of the best men in the profession to counteract the pernicious influence of misguided and ignorant fanatics in the various State legislatures, as well as in the central seat of government. Small wonder, indeed, that all the efforts notwithstanding which have been put forth by large aggregations of medical men, as well as by some of the most influential individuals, the question of the establishment of a National Bureau of Health at Washington for the control and regulation of various matters relating to public hygiene etc., is as far from being realized as it ever was.

The constitutionality of State interference in the regulation of medical practice is a well-recognized fact in almost every State of the Union, and the principle involved in this sort of legislation stands settled and approved by the Supreme Court of the United States, and that of every lesser community before which it has been brought, and still not a year passes without its being assailed in all those States where the law to regulate medical practice has been introduced, after years of untiring efforts, humiliations and prostrate crawling before the politicians; and if constant vigilance were not unceasingly exerted there would be the danger of some politician slipping in certain little paragraphs that would annul the labor of years. Medical men, notwithstanding the peculiar nature of their occupation, should actively identify themselves with the various political and social movements which engage the attention of the community. The modern complicated social machinery has called into existence so many "palpitating" issues of the day, so many questions which force the attention of the intelligent and the public-spirited, that to be in closer touch with the manifold interests of the community is an absolute prerequisite for public recognition and respect, and the physician, least of all professional men, because of the very nature of his professional duties that force on his confidence matters of the most delicate nature in the individual, and those of immense importance, such as public hygiene in the widest acceptation of the term—in the community at large—the physicain can indeed, ill afford to stand at a safe distance from the burning questions of the hour, and then complain of mistrust and clamor for a share of public gratitude. The public esteem gained and the diffidence and suspicion dissipated, the many medical societies must make it one of their most important aims to create sufficient substantial political power to produce a tangible impression on the powers that rule, to be wielded *pro re nata;* the effect of the various dissensions that this may call out will be more than overbalanced by the results of the application of a united effort in a certain definite direction. Create representation in the legislative assemblies of the land and you are enabled to effectively repel the many unjust attacks for which the profession has for such a long time served as a tempting target for such as would not dare to attack in a like manner any other profession. Representation will further the establishment of that *esprit de corps* which forms the very essence of a united profession. Through representation you exert a healthy influence on whatever concerns medical matters, such as medical education, hospitals, dispensaries, unification of State boards of examination, etc., as well as public hygiene, quarantining, appointment of coroners and the like. Now, I am but too well aware of the fact that such recommendations may cause apprehension lest, if adopted, they lead to centralization and this again to so-called paternalism. Such propositions may be relegated by some to the domain of Utopia and dismissed as impracticable or premature; others may stamp them as an invasion into the personal rights of the individual, fostering attempts on the constitutional liberty of the free-born citizen, etc. Such has alway been the hue and cry of the many opponents of the State regulation of the practice of medicine; and listening to them, as I had an opportunity while attending the hearings on this subject before the Massachusetts legislature, I could not help paraphrasing in my mind the famous saying of Dr. S. Johnson about patriotism being frequently the refuge of a certain class of people.

Facts are the best arguments. The system of regulating the practice of medicine has existed for a dozen years or so and already it has resulted

in an undoubted improvement of the general standing of the profession, and if rigorously and honestly enforced it will undoubtedly become a most potent factor in the medical reform movement. Who can measure the gain that accrued to the people at large through the passage and enforcement of these measures in almost every State of the Union?

In conclusion let me repeat what I said on a similar occasion three years ago:[6] "It is high time that our State and central legislatures take a more active hand—guided by discretion and knowledge—in the amelioration of medical affairs of the land. The *laissez faire* system with its resulting individualism run amuck has about reached its highest stage of development. Decisive, intelligent interference will in the course of one or two decades revolutionize our medical affairs, improve the general standing of the physician, and elevate the profession to a position where it shall command the respect not only of the immediate community, but of the whole world. There is an undercurrent in the social life of to-day the rumblings of which are heard by every attentive ear, and which is bound sooner or later to appear on the surface; and that is the tendency to widen more and more the sphere of government and increase its power—wisely and with circumspection—as against the encroachments of individuals or corporations; for no individual however powerful, no corporation of individuals however mighty, can or will benefit the community at large, as can the State, forming a part of the people, kept in check by the people, and legislating for the people."

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AN INTERESTING ACCIDENT OF STAINING.

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IN the winter of 1898, while working with a mount of sputum, I used as a contrast stain methyl instead of methylene blue. In this mount I noticed a rod about three times the size of the tubercle bacillus and shaded light lilac. In other mounts the rods were constantly present in various sizes, but I paid little attention to them, thinking they were accidental air bacilli. Later at the Sanatorium at Fort Stanton, New Mexico, I showed these rods to Assistant Surgeon Ramus, who undertook to isolate them. He could never demonstrate them except with the methyl-blue stain and if this were true it was certainly interesting and such a rod, if a bacillus, should be isolated and classified.

In going into the matter thoroughly it was found to be a crystal of the stain. It was noticed that the presence of carbolic acid and heat produced beautiful crystallization and fresh preparations of the stain gave crystals much more uniform in size and much smaller than in old preparations. The crystallization seems to take place only in the presence of an albuminoid substance.

Incidentally in regard to staining sputum it is well to again call attention to the accident of staining with Sudan III. I acknowledge that it is a good stain for the tubercle bacillus, but it is unreliable. Several have called attention to the crystals found in the mount from this stain; and where we have sputum of a doubtful case Sudan III. must not be relied on, for it deposits crystals that very closely resemble the bacillus. I have in mind one case with temporary cold and expectoration which was stained with Sudan and it was thought that bacilli were present, but staining with all other methods, cultivating, and running through guinea-pigs were negative.

It is well to repeat the warnings that laboratory workers have given against the accidents of staining from old preparations of gentian-violet, methyl-violet, Rosaniline, and Sudan III. In sputum work especially must we use care with these stains. In well-marked cases where the bacilli are plentiful it makes no difference, but where the infection is recent and the diagnosis hard to make we should be prepared to exclude all sources of error and avoid any confusion by being able to say positively that we have, or have not, a tubercle bacillus in the field.

[6] "Some Aspects of Medical Practice, Boston Med. and Surg. Jour." Vol. CXXXVIII., No. 18.

MEDICAL PROGRESS.

Fat-splitting Ferment of Stomach.—Further studies on the fat-splitting ferment normally found in the stomach have led F. VOLHARD (*Zeitschrift f. klin. Med.*, Vol. 43, No. 5 and 6) to the following results: (1) The ferment is very sensitive to the action of alkalies, but less so a glycerin extract of the mucous membrane of the stomach, while, on the other hand, it resists the influence of acid more than the extract; (2) The gastric juice contains the actual fat-splitting ferment, the mucous membrane its zymogen; (3) The decomposition of fat does not go on at a steady rate but the action is manifest only at irregular intervals; (4) The reaction is incomplete since independent of the amount of neutral fat present, and only a certain percentage is split up; (5) The law of Schietz and Borissow that the products of digestion are the equivalents of the square roots of the amount of ferment probably also holds true here; (6) In achylia gastrica the secretion of the ferment in question is also diminished; (7) Strong degrees of hyperacidity inhibit the process.

Studies in Hematology.—A very detailed and interesting article on certain structures in the blood, more particularly the granular elements found in pathologically altered erythrocytes is given by E. BLOCH (*Zeitschrift f. klin. Med.*, Vol. 43, No. 5 and 6). He finds that the living protoplasm does not readily take up the aniline dyes and that the degree of its tingeability is in direct proportion to its proximity to absolute death. The various granules and networks described in the red cells are not pre-formed structures, but are precipitated by the action of the fixing agents

and stains employed, yet they give evidence of a certain change, generally degenerative in character, which is going on in the cell. Granular degeneration of this nature is seen in many conditions, such as after experimental poisoning with phenylhydrazine, in Biermer's anemia, carcinoma, lues, tuberculosis, malaria, chronic suppuration, leucemia, rachitis and lead-poisoning. In chlorosis, pernicious anemia, diabetes mellitus, acute yellow atrophy and hepatic cirrhosis it is generally absent. Concerning malignant tumors, there need not be an extensive breaking-down of tissue to cause these granules, since they have also been seen in non-ulcerating scirrhus growths, and with reference to saturnism it seems that treatment does not cause their disappearance. In the red cells of malarial cases there also appear other granules which by some are considered the spores of plasmodia. The author believes that the true granules of degeneration are cytoplastic and not nuclear in origin for the following reasons: (1) Karyokinetic figures and granules may be abundant in one and the same red cells. Since karyokinesis represents a high type of specialization, basophylic granulation on the other hand a retrogressive process, it is obviously improbable that both processes should go on in the nucleus. (2) The relation of the granules to aniline dyes proves that they do not consist of nuclein or nucleinic substances, since, though they stain well with methylene blue, they do not take up methyl green, which is an almost specific reaction for nuclear material. (3) Granules and transitional forms between nucleated and granular cells are not found in the marrow and transitional forms do not occur in the circulating blood. The various forms of degeneration which may go on in normal or polychromatic red cells is thus summed up as follows: Considering both cyto- and karyoplasm, (*a*) *karyorrhexis or karyolysis,* (*b*) basophilic degeneration of the cytoplasm, (*c*) karyorrhexis or karyolysis or both together with cytoplastic degeneration.

Bacillal and Lysoform.—Careful experiments have been made by H. CRAMER (*Münch. med. Woch.*, Oct. 8, 1901) upon the efficiency of the two recent substitutes for carbolic acid, bacillal and lysoform, with the result that he prefers the first-mentioned of the two on account of its cheapness, lack of disagreeable odor and strength, a 1-per-cent. solution killing most organisms inside of 1 to 2 minutes, owing to the physical condition of many tuberculous sputa; however, a stronger solution and longer contact are necessary to insure comparative sterility. The author has fewer words of praise for lysoform, which, unlike bacillal, is not a creosol compound, but a solution of formaldehyde in perfumed soap. It seems to answer the purposes more of a deodorizer and cosmetic than a true antiseptic, for the staphylococcus aureus withstands a 3-per-cent. solution even after one hour.

Treatment of Tetanus.—It has been recommended to treat tetanus by repeated injections of saline solution into the organism, the theory being that the circulating toxin will thus be more readily excreted owing to change in blood-pressure. C. TONITZ (*Münch. med. Woch.*, Oct. 8, 1901) has experimentally investigated this method on animals and since he has lost several concludes that absolute success is not to be looked for in man, for the virus does not entirely circulate in the system, but in part is held combined with the tissue-elements. The tetanic symptoms are, however, rendered less acute and death may be postponed for several days.

The Asepsis of Catheterization.—To absolutely ward of infection during catheterizing, germ-free urine, urinary passages, instruments and lubricants are necessary. E. MANKIEWICZ (*Wiener klin. Rund.*, Oct. 6, 1901) states that it generally is impossible to render the urine sterile, since catheterizing to often is a procedure which must be done immediately and does not permit of preparation. Where time, however, is less pressing, much good can be done in warding off catheter fever by several doses of quinine, salol or urotropine. For the sterilizing of the urinary passages, cleansing of the meatus with benzine and sublimate and irrigation separately of urethra and bladder with saline solution or dilute silver nitrate, is recommended. A much more satisfactory subject is the sterilizing of instruments; those of good rubber or metal can readily be boiled, and it is only the woven-silk catheter which requires a special method, namely, the boiling in a strong solution of neutral ammonium sulphate. Little difficulty is generally encountered in preparing the lubricant; it is best here to use sterile vaseline in collapsible tubes.

Treatment of Anthrax.—A contribution to the therapy of this disease is made by FR. SCHULTZE (*Deut. med. Woch.*, Oct. 3, 1901). The patient under treatment was a butcher who had contracted the disease from an infected cow. His case was characterized by marked edema of face and chest, deep ulcers of the face, much difficulty in swallowing from edema of the throat, severe dyspnea, inflammation of the kidneys, and of larger bronchi, and a general condition resembling typhus. The patient made a complete recovery in four weeks, the treatment employed consisting of local applications of bichloride of mercury solution (1-1000) to the ulcers, and quinine (gr. v, q. 3 h.) and naphthalin (gr. v-x, daily) internally, for the fever and diarrhea respectively. The use of carbolic acid and iodine injections he considers harmful, especially in the face. Hot applications are of doubtful value. Incision, with cauterization, must be done early, before the surrounding tissues are infected, to be of any use. He does not believe it necessary to remove neighboring glands. On the whole, treatment should be conservative, rather than radical.

Potatoes and Diabetes.—Some time since it was announced that a diet of potatoes was favorable to the course of diabetes, producing a marked amelioration in the glucosuria, diuresis and thirst combined with a marked inprovement in the general condition of the patient. This view was first

advanced by A. MOSSE as the result of extensive observations. This investigator now reports (*Jour. Phys. et path. générale,* Sept. 15, 1901) the detailed study of two cases which confirms his opinions of the benefit to be derived from this diet. He submitted the urine and feces of these patients to extended examinations. He shows that the benefit in these cases is to be ascribed neither to defective absorption nor insufficient transformation of the carbohydrates present in the potatoes, the amount of such material voided by the intestine not being materially altered. He believes that the large amount of water introduced into the system on such a diet is an important factor. Furthermore that the hydrocarbons of potatoes are more utilizable by diabetics than has been hitherto supposed. This subject is of importance from both biological and clinical standpoints and is worthy of more extended investigation.

Treatment of Cerebral Arteriosclerosis by Inorganic "Serum."—Following the recommendation of Trunecek of Prague, a number of cases of cerebral arteriosclerosis with persistent symptoms, were treated by LÉOPOLD-LÉVI (*Gaz. Hebdom.,* Oct. 6, 1901) by subcutaneous injections of an inorganic "serum" containing sodium and potassium sulphates, sodium chloride, phosphate and carbonate in distilled water. Cases of hemiplegic character were selected in the first group, to eliminate disease of the medulla; the symptoms observed were motor, sensory and vasomotor, together with alterations in reflexes. In one case 20 injections aggregating 57 cubic centimeters of the mineral serum caused a disappearance of paresthesia of two years standing and a marked diminution of paresis of the left arm and leg; the patient was enabled to resume his occupation after six months of enforced idleness. In another case the symptoms were tingling, pain, paresis, exaggeration of reflexes involving the extremities of the left side, loss of memory, ringing in the ears, disturbance of vision, articular pains. The mineral serum injections amounted in all to 50 c.c.; a notable amelioration of the symptoms followed. The author declares that when reading the reports of Trunecek's success he was inclined to be skeptical, but the remarkable results obtained in his own cases compel him to recommend further trial of this method of treatment.

Peculiar Auditory Effects of Cinchomism.—Ordinary tinnitus aurium due to middle-ear disease never transgresses the limits of pitch from "d-1," 297 vibrations as the lowest point, to the "f-2," 704 vibrations as the highest. C. SEILER (*Med. Rec.,* Oct. 26, 1901) has found that such tinnitus has no effect upon articulation. In cases of tinnitus due to quinine, sodium salicylate etc., a much higher pitch is invariably found, ranging from 1,584 to 3,960 vibrations, being higher when salicylates were used than when quinine was the cause. Furthermore there was a well-marked interference with the articulation of certain sounds, especially those consonant sounds of very high pitch, such as "th," "s," "sh" and "z." It is well known that the hissing of steam makes it difficult for a person standing near to articulate sounds produced by about the same number of vibrations, but it is difficult to understand how this subjective tinnitus could so markedly interfere with articulation and vocalization.

Collapse of the Lung in Pneumothorax.—The question whether complete collapse of the lung does or does not occur in cases of pneumothorax, is still an open one. To answer this question, D. HELLIN (*Berl. klin. Woch.,* Oct. 7, 1901) experimented on puppies, producing in these animals a bilateral pneumothorax. He argued that the animals could be kept alive, in spite of the pneumothorax, provided the lungs were still capable of receiving a certain amount of air. It was found that even with a pleural opening as large as the tracheal circumference, the lung did not completely collapse. The author disputes the statements of König, Landois and Riedinger, who declare that in the absence of pleural adhesions bilateral pneumothorax necessarily causes immediate death. There is no clinical case on record which corresponds to this description, but the physiological and pathological conditions in such a case would be the same as in the animal experiments reported by Hellin.

Non-Parasitic Chyluria.—A number of cases of chyluria have been reported in which vigorous and repeated search failed to find parasites in either blood or urine. Autopsy in some of these showed mechanical obstruction to the lymph-flow. DR. SLOSSE (*Bulletin de la société royale des sciences méd. et nat. de Bruxelles,* July, 1901) adds a case to this list, in which as in many of the others, the ordinary day's urine was clear and contained neither fat nor albumin. If urine were allowed to accumulate in the bladder, or if the patient assumed the dorsal decubitus, chyluria resulted, while lying on the belly had no effect. This intermittence is of diagnostic importance. Chyluric urine contains finely-emulsified fat, much albumin, often fibrin, and sometimes a little blood. On standing a cream-like layer rises to the surface. The microscope shows fine, very refractive oil-globules and larger oil-globules, all animated by the Brownian movement, and perhaps a few leucocytes or strands of fibrin. The author found that the chylous urine deprived of its fat by ether, was capable of making a fine emulsion with oil, and this property he attributes to the large quantity of albumin present. There was no sugar in the urine, though such is found in lymph.

The Worsted Truss.—The simple means of treatment in medicine and surgery are alike attractive to the patient and the practitioner on account of cheapness for the former and ready availability for the latter. No truss for the retention and cure of hernia in children, says J. C. HUBBARD (*Annals of Surg.,* October, 1901), is any better than a skein of worsted. As a rule, a whole skein is too bulky and hence should be halved. It is applied by placing the loop-end

over the external abdominal ring, passing the skein across the abdomen to the left, horizontally across the back, thence forward over the right loin and groin to the ring, through the loop already there, over the internal surface of the thigh and perineum, upward over the buttock to meet the horizontal reach across the back, to which it is tied after the hernia has been replaced and the truss tightened to retain it. This truss irritates the skin only when soiled, can be washed repeatedly until its softness and elasticity are gone and is renewable at a very moderate cost. As in the case of all truss-treatment in hernias, the watchfulness of the mother is as much a factor in the result as is anything else. In about two-thirds of the cases so treated cure or improvement has resulted. In the others operation alone was efficacious.

Epidemic Cerebrospinal Meningitis.—Three types of this disease as it occurs in infancy are described by J. LOVETT MORSE (*Annals of Gyn. and Ped.*, Oct., 1901). The acute type is represented by a case with excessive cerebrospinal pressure and bulging fontanelle and death in four days. The autopsy showed dilated ventricles, flattened convolutions, and but little inflammatory change. Lumbar puncture, by diminishing the pressure, might have prolonged life. The symptoms of the second or *usual* type, as illustrated in a case, were retracted head, depressed fontanelle, some opisthotonos, crying when moved, waking with a sharp cry, vomiting at onset, not afterward, pupils equal, small and reacting to light, nasal discharge, and Kernig's symptom. There was no ankle-clonus, and no eruption. Later the pupils dilated widely and the fontanelle bulged, but lumbar puncture gave no relief. Death ensued in two weeks. The third or *chronic* form is exemplified in a girl of seven months, who at the onset in November would lie apathetically, the head somewhat drawn back, but at times moved from side to side. She would cry from handling. The abdomen was slightly retracted. The diplococcus intracellularis was found in the cerebrospinal fluid. Apathy became steadily more marked, a mucopurulent nasal discharge appeared, the pupils were equal, dilated and reacted feebly to light, the fontanelle was level, photophobia and lively knee-jerks were present. In April she lay quiet, unnoticing, pupils unequal, reacting slowly to light, without spasm or paralysis except slight internal strabismus. The eye-grounds were normal at repeated examinations. From the onset vomiting persisted, and for five months prior to her death on April 24th, she was fed by gavage or enemata. The loss of weight, however, was comparatively slight. After December 5th the temperature was normal, and at no time was Kernig's sign present.

Transfusion in Shock and Collapse.—Transfusion, or the rapid introduction of fluid into the vascular system, is most frequently performed in cases which are often indifferently described as cases of shock or collapse. But these two conditions differ fundamentally in their pathology and in the treatment they require, as is pointed out by A. P. BEDDARD (*Guy's Hospital Rep.*, Vol. LV., 1901). In both conditions the surface is cold and anemic, the respirations shallow, quick and often irregular, the pulse of low tension, frequent and small. But there is this fundamental difference between the two, that the case of collapse has lost a large quantity of fluid and the case of shock has not. In shock the veins in the splanchnic area especially lose their tone and dilate widely; the patient has bled into his own abdominal veins, and he suffers from a tremendous loss of arterial blood pressure. The indications in shock are to prevent the accumulation of blood in the abdominal veins by stimulating the vasomotor and respiratory centers; while these continue to act feebly, replace their action artificially (1) by artificial respiration; (2) by placing the patient's head lower than his feet; (3) by firmly bandaging abdomen and limbs. Meanwhile use strychnine and digitalis for cardiac stimulation, and keep the patient warm to encourage his recuperative power. The symptoms of collapse are due to excessive loss of fluid from the vascular system. In cases of severe internal hemorrhage, immediate transfusion is contraindicated as long as the bleeding vessel remains untied; when the bleeding has ceased, if the patient is dangerously collapsed he may be cautiously transfused, per rectum or subcutaneously. Collapse may develop from the continued loss of fluid by severe vomiting and diarrhea, as seen in cholera, summer diarrhea of infants, ulcerative colitis and uremia. Diagnostically it is important to remember that in cases of uncomplicated shock the specific gravity of the blood is not materially altered, but may be very slightly lowered; hemorrhage lowers the specific gravity in proportion to its extent, while injury to tissues without material hemorrhage raises it. By Hammerschlag's method (mixture of chloroform and benzol), the specific gravity of the patient's blood may be rapidly and repeatedly taken.

Asepsis of the Hands.—A surgeon is just as blameworthy if he treats a wound with germs on his hands as is the physician who prescribes a poisonous dose. A. DEPAGE (*Bull. de la soc. royale d. sc. méd. et nat. de Bruxelles*, 1901) washes the hands in water, then in alcohol, then in sublimate solution, and finally rinses in sterilized water. Cultures on agar are taken from about the nails once each operating day. Reporting on the results for sixty-two days, he states that the surgeons and internes almost all gave cultures during the first five days, but on all the other days cultures were obtained only twice. This indicates that the surgeons quickly learned to prolong the washing as much as necessary. A nurse, however, was persistently septic for fourteen days, while medical men, who, a number of times, were asked to assist at operations, could not be made to wash sufficiently long, and always gave positive cultures.

Appendical Operations.—The surgical treatment of appendicitis will probably reach a fixed basis in time. The rules of its procedure in Germany are enunciated by REHN (*Archiv f. klin. Chir.*, 1901, B. 46, Hft. 4), as follows: (1) Severe and intense primary seizures demand immediate operation; (2) after operation all symptoms should promptly decrease; (3) recurrence of grave symptoms may demand another surgical interference; (4) repeated acute attacks always demand removal of the organ.

The X-Ray in the Diagnosis of Renal Stone; Report of Four Cases.—It seems to be true that stones containing mineral salts are more readily photographed than others, yet in two cases reported by P. THORNDIKE (*Boston Med. & Surg. Jour.*, Oct. 17, 1901) the stones were made up largely of uric acid, and in both distinct shadows were evident, while in one of them the stones were shown with considerable clearness, probably due to an admixture of calcic phosphates. In another case where there were present three small calculi of calcic oxalate with a trace of calcic phosphate, the photographer interpreted a shadow which Thorndike himself could not see; there was ample clinical indication for operation here without the X-ray photograph. In the fourth case there was some doubt about the interpretation of the plate; clinically the case called for operation and a complete exploration of the kidney demonstrated the absence of stone, the case proving to be one of hydronephrosis due probably to sagging of the kidney.

Postdiphtheritic Urticaria.—One of the objections to the use of diphtheria antitoxin is the fact that after its use an urticarial eruption occasionally occurs. J. J. WALSH (*Phila. Med. Jour.*, Oct. 12, 1901) reports a case in which, though no antitoxin was employed, urticaria developed at just about the time when the eruption would have occurred if antitoxin had been employed. The author believes that a slight urticaria or erythematous eruption occurs oftener than is reported and has been overlooked because cases untreated by antitoxin are now rare.

Sarcoma of the Uterus in Infancy.—As an instructive example of the tumors to be considered in and about the uterus in infancy, J. LORTHIOIR (*Journal de Chir.*, Aug. and Sept. 1901) reports one of sarcoma in a child three years old. In December, 1900, a small fibrous mass apparently fibroma was removed from the cervix. In March a partial vaginal hysterectomy was done by morcellement. In June a total ablation of the stump of the uterus and appendages was done by the abdominal route, for an enormous recurrence which filled the true pelvis. Death occurred by shock. The autopsy showed involvement of the mesenteric gland. Microscopically the first tumor removed was fibrous and all the tissue ablated at the other operations was more or less sarcomatous with small round-cells.

Pus in the Uterine Adnexa.—After reviewing the literature and their own experience on the subject of collections of pus in the uterine adnexa, L. MANDL and O. BURGER (*Archiv f. Gyn.*, 1901, Hft. 1, B. 64) state their estimate of the vaginal and abdominal routes of evacuation to be the following: (1) Other things being equal, they always prefer the vagina. (2) In double-sided purulent inflammation of the adnexa abdominal bilateral salpingo-oöphorectomy is now rarely done at their clinic. The operation has all the disadvantages of any laparotomy and presents no advantages in the line of permanent results. (3) Unilateral abdominal salpingo-oöphorectomy can be considered only when the disease is certainly focal on one side and the other side has surely escaped. Even then it is preferable to aspirate and determine the virulence of the pus. (4) Abdominal section is *per se* reserved for all cases which are inoperable per vaginam. (5) The vaginal route is the better in the usual run of cases when the inflammation is unilateral, bilateral and chronic. They have had the best immediate and remote results with it. (6) The advisability of a one-sided vaginal operation is only questioned when it is manfest that the uterus is normal, the opposite side intact, the pus on bacterological examination not virulent, and the abscess evidently well walled from the general peritoneal cavity. (7) Vaginal incision is, however, to be executed only under definite conditions. Some of the newer procedures with the purpose of heading the pathological processes are not to be brought into competition with it. Likewise some of the conservative operations must be recognized, but their final result in their hands does not make them first choice. (8) Abdominal incision must be reserved for those rare cases of purulent inflammation about the uterus where the pus-tumor is best opened through the abdominal walls.

Cancerous Inoculation.—Recurrence of carcinoma by pure inoculation has always been a disputed question, with the affirmative evidence although slowly yet probably surely accumulating. The following summary of what appears to have been such a case is given by R. SCHAEFFER (*Zeitschr. f. Geburtsh. u. Gyn.*, 1901, B. 45, Hft. 3) in these succinct terms: (1) The case was one of recurrence in the abdominal parieties, after at total extirpation of the uterus by the abdominal route along with the manifestly-involved large lymph-channels and nodes. The retrograde recurrence in or about the remnants of the genital appendages did not occur, although that would be the site and the manner one would reasonably expect; (2) the extirpated organs, especially the ovaries, and the recurrence in the parietes showed alike adenocarcinoma; (3) the recurrence in the abdominal wall was also the only one discoverable clinically and by microscopical examination at the time of the operation. Segments removed there showed that it was developing entirely anterior to the deep fascia having left the peritoneum entirely intact; (4) the removal of the brittle, broken-down mass appears to have been the source of direct cancerous infection.

Large Ventral Hernias.—The immediate results of the following procedure in large ventral hernias with separation of the recti have been very flattering states A. HAMMESFAHR (*Centralbl. f. Chir.*, 1901, No. 38); that the ultimate and functional results are not yet determined, because all his patients have been too recently operated on. The first step in the operation consists in removing as wide a segment of skin and the underlying fat as possible, from the symphysis pubis to the ensiform cartilage. The hernia is now treated by reduction, the sac being unopened. The rectus sheath is next opened in the middle line from end to end and the muscle bellies made free within it. The sutures, of wire, silver or aluminium-bronze, pass through the anterior sheath of the rectus and the muscle at or near their lateral limits, then between the muscle-belly and the posterior sheath toward the middle line, then forward through muscle and sheath. They then cross the middle line step-by-step in the reverse order, finally emerge at the lateral border of the sheath of the rectus. When tied the muscle bellies come together, folding slightly inward with the anterior sheath similarly folded inward lying between them. The skin is then closed in the usual manner.

A Natural Inelastic Uterine Balloon.—After suitable preparation a pig's bladder forms a cheap, universally available and, according to C. BAUMM (*Centralbl. f. Gyn.*, 1901, No. 38), entirely satisfactory obstetrical uterine balloon. The bladders can be secured in various sizes, from very small to that of the fetal head. The neck of the bladder is tied with tape or other flat medium about a small flexible tin tube, with a collar to prevent slipping. A flexible staff is passed up this tube into the bladder and by this means the balloon is introduced into the cervical canal. The preparation of the bladders is the following: Immersion for eight days in an alcoholic solution of corrosive sublimate, 1 in 180 parts. Storage after that in 96 per cent. alcohol. Ether is not advised, because after soaking in it the bladders are porous and leak. The bladders out of alcohol are stiff. Warm lysol solution prepares them for use.

Gastric Syphilis.—Truly local gastric syphilis is too often not diagnosticated, says W. S. FENWICK (*Lancet*, Sept. 28, 1901), and he reviews the symptoms in the following terms: Extremely severe nocturnal pain, infrequent hematemesis, active recurrent vomiting and obstinacy to all except antisyphilitic treatment are the cardinal features. The pain is due to the ulceration of the gumma, epigastric in site, usually provoked by solid, infrequently by any food, at times practically constant, even when the stomach is empty, at such times reaching its acme at night and radiating over the entire abdomen, and into the neck or upper and lower extremities, very commonly accompanied by syphilitic pains and tenderness in the long bones and the cranium and epigastrium, and by flatulence, acid eructations, burning in the throat and vomiting. Emesis is another conspicuous feature at first occurring only with the crises of pain, later after the secondary general gastritis is present following every meal and sometimes showing exacerbations which last many days, and depreciate the patient greatly. Through loss of nourishment, the appetite may be excessive. Cachexia or profound anemia is always secondary. Scanty neutral rather highly phosphatic urine is present. Hematemesis, the usual sign of round ulcer and necrotic cancer, is rather rare because the obliterating endarteritis prevents it. If the liver and spleen are seats of syphilitic lesions and the portal circulation is engorged, then the bleeding may be extreme in degree and persistence. Antisyphilitic treatment is well borne and rapidly relieves. The differential diagnosis is between simple, syphilitc and cancerous ulcer and tabetic crises in the stomach. Syphilitic ulcer is distinguished from simple ulcer by the excessive pain often nocturnal alike in the stomach and the long bones and by its yielding to antispecific medicies and presenting a much more profound anemia and emaciation. Gastric cancer for the relative age of the disease is still more active in depreciating the patient and may give a tumor on physical examination. Gastric crises in tabes dorsalis come at irregular intervals, can usually not be foreseen and frequently have no relation to digestive processes.

Microscopical Gynecological Diagnosis.—The detritus removed by curetting from the uterus should in case of any doubt be examined microscopically. Such a procedure will distinguish the benign from the malign conditions, as is briefly indicated by BROUHA (*Gazette de Gynecologie*, Sept. 15, 1901). Glandular endometritis presents multiplied, corkscrew-like, elongated glands instead of the straight normal glands, hence its other name hypertrophic. In hyperplastic endometritis the number of the glands is increased either by a dipping downward of the epithelium or by a bifurcation of already existing glands or by both combined. Interstitial endometritis presents augmentation of the connective tissue elements, especially near the surface of the mucosa. Sometimes while the superficial layers are in a state of interstitial inflammation, the deeper will be either hypertrophic or hyperplastic. Clinically the catarrhal cases are usually hypertrophic, the painful interstitial and the hemorrhagic are all three combined. Placental retention is shown by chorionic villi. Old cases may be difficult, because the cell arrangements have changed. Post-abortion endometritis and sometimes ectopic gestation are best shown by the correlation between large masses of dead or dying cells comprising the old decidua and similar masses of cells characteristic of pregnancy, *i.e.*, hyperplastic. Membranous dysmenorrhea, in addition to the clinical membranous cast of the endometrium, shows a high grade of interstitial hyperplasia with decrease in the number and alteration in the arrangement of the glands. Benign hydatiform moles present vari-

ous hyperplasias, myxomatous in the stroma and chiefly hypertrophic in the villi. Deciduoma malignum is a network of cells multinuclear and vacuolated. Uterine carcinoma may be found in its early stages, and any of its types, glandular, epitheliomatous, etc. Malign adenoma may also be discovered before it has gone far. Sarcoma with its predominating connective-tissue basis is also always to be looked for. Such examinations will always be of advantage to the patient and aid the physician in his choice of treatment.

Acid Intoxication of Diabetes in Its Relation to Prognosis.—While it is well known that diabetic coma is regularly associated with the excretion of large quantities of organic acids, comparatively little attention has been given to the study of the excretion of such acids during the course of diabetes previous to the coma. C. A. HERTER (*Jour. Exp. Med.*, Oct. 1, 1901) reports the examination from this standpoint of twelve cases of diabetes at different stages of the disease. Three shortly before or during coma showed large amounts of these acids in the urine. Four showed such increase several weeks before coma. In five, of which the outcome is not yet known, there was a fair increase. The estimations of organic acids present was stated in terms of oxybutyric acid because this is the preponderating organic acid present in diabetes. The amounts of glucose and organic acids present are usually parallel, but this is not always the case. The condition of diabetic coma is preceded by a period of days, weeks or months, in which there is a large excretion of these acids and patients whose urine show this condition are in danger of coma. A patient passing 30 grams of these acids daily may have sufficient energy and strength to be about and perform considerable work. A patient who has been excreting a very small amount of these acids and has gained weight may within a few months show the presence of considerable quantities of such acids and die in diabetic coma. When the urine shows only a small amount of these acids there is no immediate danger of coma, but such patients are liable to most of the complications which threaten diabetics. The amount of glucose present is not always a guide to the quantities of these acids being excreted unless the amount of glucose is large (200 grams). The acid intoxication is an important and dominant factor in the prognosis of this disease and frequent estimations of the amount of organic acids present should be made. The withdrawal of carbohydrate food frequently leads to a marked reduction in the quantity of organic acids excreted.

Cyclic Albuminuria.—In recent years considerable attention has been directed to the transitory or intermittent appearance of coagulable proteids in the urine of apparently healthy individuals. This condition has been designated as "physiological albuminuria," but much dissatisfaction has been found with this term as it is considered by many that all types of albuminuria are pathological. L. B. MENDEL and D. B. HOOKER (*Jour. Exp. Med.*, Oct. 1, 1901) have studied a case of cyclic albuminuria in a young man, twenty-four years of age. His height was 5 ft. 7 in. and his weight 126 lbs. The blood-count gave 5,200,000 reds and 5,100 whites. In making the observations the urine was collected at hourly or two-hourly intervals during the waking hours, after noting the specific gravity, volume and reaction it was filtered and heated for a half-hour or more in a boiling water-bath, a few drops of acetic acid being added when necessary to facilitiate the coagulation of the proteid. The latter were removed by filtration through paper, washed free from chlorides and dried to constant weight. During seven days' observation the average daily amount excreted was 331 milligrams. No relation was observed between the amount excreted and the diet consumed. No rise in proteid material was observed as the result of muscular exercise. A marked influence was observed as the result of posture all proteids disappearing with the maintaining of the horizontal position. No relation was observed between the volume of urine and the amount of proteid excreted. The attempt at the present time to refer physiological albuminuria so-called to attending circulatory changes in the kidney is nothing more than interesting speculation.

Experimental Data Concerning Hypodermic Injections.—This subject is of interest as applied to hypodermic medication. The general conception has been that the larger the amount of fluid employed the more effective the filtration and the better the absorption, so that it is possible to increase the effect without increasing the dose by augmenting the amount of fluid injected. S. J. MELTZER (*Jour. Exp. Med.*, Oct. 1, 1901) considers this subject from an experimental standpoint. He utilized rabbits and employed strychnine for hypodermic use on account of its characteristic reaction and the short time in which a decisive response can be obtained from its use. In the first series of investigations he endeavored to ascertain whether with a given amount the effect produced could be increased by extending the area of injection. He found that .9 milligram of strychnine distributed in injection amongst three extremities produced tonic and clonic convulsions, the first attack being twenty-seven minutes after injection. Five days later the same animal was injected with 1 milligram in one leg. No effect was produced. In another series he employed various doses of strychnine in different dilution; 8 milligram in 1 to 10,000 dilution produced no effect; 6 milligram in 1 to 200 dilution produced marked convulsions in eleven minutes. The same animal was used in both experiments, the interval being five days; .5 milligram in one-per-cent. solution kills a rabbit in a few minutes, while nearly twice as large a dose in 1 to 20,000 dilution produces no effect. This work shows that the two governing factors in the effectiveness of hypodermic medication are: (1) the area of the distribution of injection, and (2) the concentration of the injected solution.

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THE BENEFIT ORDER AND THE PHYSICIAN.

THERE are, as every active practitioner knows, in almost all parts of the world certain fraternities, orders, societies and lately even companies whose sole object it is to secure medical care "by contract" and at "wholesale rates." Such bodies, too often irrespective of the quality of the medical care they secure, hire the unsuspecting new graduate and, giving him a paltry few hundred dollars a year for his services, run him to death with work which at even the minimum usual rate for individual calls will always amount to at least from three to ten times the stipend given by the society "employing" the doctor.

In Europe these orders have increased in number so rapidly and so enormously in membership that the question has taken a serious meaning as to the means by which the individual practitioner shall perform his duty to society and to his family. We have already in our columns called attention to the "strikes," pitiable because undoubtedly necessary, which have taken place among the physicians in Munich and Bamberg, because they found their fees cut to about *nineteen cents* per visit by these conditions.

In France, recently, the Société Médicale du Neuvième Arrondissement referred the question to a committee of prominent members whose report we here quote almost verbatim, as it may serve as a warning to us in this country of the possibilities in such cases, since this vampire is already present in this country, and because we believe that no right-minded physician will so demean himself as to submit to such an imposition if the facts are known.

The report of A. Gardette, Chairman (*Gazette de Gynecologie*, Aug. 15, 1901) reads: "I ask your permission to review briefly the facts which are at the bottom of the inquiry addressed to you by our confrère (M. Lacaille) for attention and advice. A society, and later, several cooperative societies, waited upon him with the request that he remit part of his fees entirely for their benefit and that of their fellow members—in other words, interference was sought by third parties in the exercise of our profession, and this was purely by intermediaries and commissioners who love to live only by the work of others. Such aim to place themselves between the physician and the patient only to take much of his income, without any benefit whatever in return, although often at the cost of his health he has to struggle to get his means of livelihood. Shall we permit these parasites to suck away our slender support? Shall we warn all those physicians, who are inclined to look solely at their own temporary good and to neglect the good of the profession in general, that they will lose more than they gain?"

Such is in brief the situation outlined by M. Lacaille. The aim of these organizations is simply to make themselves the brokers, the physicians their clerks, and the patients the wares. The committee recommends "(1) that the society send a circular to each practitioner in the arrondissement warning him of the fallacy and of the encroachments of these societies; (2) that the society recommend to each of its members a campaign against these societies through the medium of the medical press; (3) that the society send a memorial to the faculties of the medical schools requesting yearly instruction to the outgoing classes upon the aims and fundamental principles and fallacies under which these cooperative bodies operate; (4) that the society send a communication to other medical societies, which may take such action as they see fit."

This hint should be early taken and the suggestion of any connection with such bodies should never be entertained, else the realization

of the blunder will be late and withdrawal from the contracts will be found embarrassing.

INSANITY, CRIME AND THE MEDICAL EXPERT.

IN the olden days, when a man was arrested for a capital crime (in this country), little thought was expended upon the question of his mental responsibility, unless, indeed, it was plainly obvious, even to the most unobservant layman, that the criminal was likewise a raving maniac.

In recent years, the American alienist and criminologist, inspired by the researches of the Old-World investigators and desirous of extending the doctrines of psychopathology, has practically revolutionized the ancient order of things and revolutionized them to such an extent that it has really become a serious question in the minds of many people as to whether the new ideas do not threaten to defeat the ends of justice. By this we mean that it has almost come to obtain at the present day that it is difficult for a criminal to escape having insanity thrust upon him as a plea for irresponsibility, when brought face to face with justice on the charge of having committed a capital crime.

It is a well-known fact that the pursuit of science will oftentimes lead men far astray from the paths of common sense, and it has long seemed to us a timely question to ask whether the (at present) much-used plea of irresponsibility which the criminal lawyer, so-called, so tactfully handles at the instigation of the alienist, may not be only another index of the latter's scientific zeal gone wrong.

Nearly every one has enough of the milk of human kindness in his breast to be willing to concede that the taking of a human life under certain circumstances could have been none other than the work of a maniac, but it does grow wearisome to take up the paper day after day and find the plea of insanity entered as a matter of routine in murder trials. So commonplace, indeed, has such a plea become that it has for some time been the frequent theme of the paragrapher and the comic editor. We hear much from them of "The Insane Murderers' Trust" and like nonsense. Nor is this the only evil that has resulted. Only the other day, in a Massachusetts court, the jury deliberately sentenced to jail a murderer, who had been pronounced by experts both for the prosecution and for the defence a most dangerous paranoiac, on the ground that the public was tired of seeing criminals who had committed capital crimes temporarily confined in insane asylums and then allowed their full personal freedom to continue to menace the community. One learns with a sense of almost horror of such a decision and yet it is impossible not to feel that it is, in a sense, only the return of the boomerang cast by the hand of the alienist.

Curiously enough, in the very wake of this absurd decision somnambulism is set up as a defence by a Massachusetts man charged with attempt to murder his wife and a patrolman. Such a defence would be ludicrous enough in any case, in that the distinguishing feature between the merely somnambulistic state and the "twilight" condition of consciousness sometimes observed in epilepsy is that in the former there is a marked absence of all impulse to deeds of violence, so common to the latter. In the case in point it was not only shown by the Government that long existing domestic infelicities culminating in a suit for divorce were present as a motive for the shooting, but it also appeared that the defendant's somnambulistic condition was of such remarkable depth that he didn't wake up until he had attempted to shoot the patrolman who came to take him into custody. This case, by the way, also presented that stock feature which characterizes all of its kind—amnesia. The insane murderer's amnesia is really most remarkable, covering, as it usually does, every incriminating circumstance in reference to the crime and—practically nothing else. And yet in the case just quoted, the alienists offered the theory of somnambulism with all its attendant vagaries; in the full confidence of the scientific excellence of their tenets. They failed, however, to convince the court.

In the face of these facts we are reminded forcibly that medical diagnosis is, after all, a nice balance of probabilities rather than possibilities. Consequently it behooves the medical expert in cases such as we are discussing to appreciate that the public at large, outraged by the commission of a heinous crime, bears with natural impatience attempts to shield the perpetrator of such crime on the plea of irresponsibility based on purely theoretical considerations or upon wire-drawn sophistry.

It is a perfectly laudable ambition to elevate the standards of psychiatry from the almost miry stratum in which they have lain for many years to the scientific levels to which they deserve to attain, but if to accomplish this there must result a serious clash between science and sterling common sense, it appears inevitable that opprobrium will be cast upon the profession and that strict justice will not always be accorded.

THE INFLUENCE OF VIRCHOW.

THE great import of Virchow's work and teaching for modern medicine is most convincingly shown in a series of special articles contributed by eminent pathologists and physicians of many lands to a jubilee number of the *Berliner klinische Wochenschrift.* Once more that "common admiration for great and good men that draws nations together" is placed in evidence.

The anatomy and pathology of disease have been studied during the past century with greater zeal and success in France and Germany than in England, writes P. H. Pye-Smith. Many of the captains of science have passed away, but Kölliker, Pflüger and Virchow still represent the great work of Germany in histology, physiology and pathology. Many Englishmen have enjoyed the benefit of Virchow's personal instruction; most of all has his influence been exerted in England through his three great publications, the Cellular-pathologie, the Krankhafte Geschwülste, and the Gesammelte Abhandlungen. Virchow's work on tumors replaced by orderly arrangement and objective facts what was before a tangled wilderness of old superstitions and modern disconnected observations. Most far-reaching have been the effects of Virchow's insight into the relation of diseases to the three primary layers of the embryo; of his discovery of the neuroglia in the nervous centers, the cellular structure of connective tissue, the mesoblastic origin of sarcoma; of his distinction between parenchymatous and interstitial inflammatory diseases of the kidney. Scarcely less worthy of note was his masterly disentanglement of the confused facts and theories concerning pyema, phlebitis and embolism.

Chance's English translation of the Cellular-pathologie appeared in 1860 and seven American editions of the work were exhausted in a few years. The edifice of pathology, founded on Virchow's great work, became its great temple of medicine not only for America but for the world. The new era, says Abraham Jacobi, ceased to have any place for "schools" of medicine in the old sense of the term; "systems" and "rational" medicine ceased to exist. American physicians are largely indebted to Virchow for the knowledge that every crisis is necessarily secondary to a local disturbance; that while parenchymatous inflammation may represent an enhancement of nutritive or metabolic processes, it does not imply an increase of power; that both pathological anatomy and bacteriology are properly to be regarded only as aids to practical medicine. Since Virchow's advent disease processes have no longer been sought in this or that region or organ of the body, but in the cell or cell-group, and efforts have been made to adapt therapeutic measures to this view. Virchow's early popularity in the United States was increased by his appreciative and learned discussion of the sanitary achievements of the Federal army during the Civil War. The needs of the practising physician and the humanitarian were ever in his mind; in the closing chapter of his Cellular-pathologie he expresses the hope that his teachings may prove of value in the clinical practice of his pupils.

In Austria a brilliant epoch for pathological anatomy was inaugurated by the activities of Rokitansky, who struggled not only to establish the subject on a scientific basis, but to win for it its righful position as leader of practical medicine. But Rokitansky was so strongly influenced by the prevailing biological views that he was led into erroneous speculations as to the causation of morbid changes; and his humoral pathology, which regarded a change in the constitution of the blood as the forerunner of all morbid anatomical conditions, held sway until Virchow appeared with his contention that the cell is the fundamental element alike in the healthy and the diseased organism, and that all cells are developed from pre-existing cells. Virchow's pupils were called to important chairs in the great Austrian seats of learning, and the force of his personal example in scientific research was thus added to the spiritual influence of his writings. One of his most distinguished disciples, Klebs, professor of pathological anatomy at Prague, accomplished far-reaching results by applying the experimental method to the investigation of the causes of infectious diseases.

Cornil, who was elevated to the chair of pathological anatomy in Paris in 1882, succeeding Charcot, went to Berlin twenty years before, at the recommendation of Claude Bernard, to receive from Virchow his first lessons in the technic of pathological histology and in autopsy methods. Hence Cornil is one of the first to acknowledge his indebtedness to Virchow for the general trend of his work; his writings are applications of the general principles laid down in the Cellular-pathologie. Sweden, Denmark, Greece, the Netherlands, Italy and Russia, speak as with one voice of the mighty influence of Virchow upon the study and practice of medicine throughout the civilized world. *"Ses glorieuses decouvertes n'appartiennent désormais ni à la critique ni mème à l'eloge."*

METROPOLITAN NUISANCES.

THE Board of Health has been making progress. It has settled the question of the tunnel nuisance in a way which can be satisfactory only to the railroad, and so leaves the subject practically unsettled. By unroofing the tunnel the gas and smoke, which were formerly almost the exclusive property of patrons of the road, will be distributed more generally and generously among the residents of Park avenue instead of being reserved entirely for those who pay fares. Electric traction in the tunnel and the millennium may be confidently expected to arrive together. The matter of negligence of the Street Cleaning Department which, aided by the work of excavating the rapid transit tunnel, has given the city more dirty and unhygienic streets than have been seen for several years, will be taken off from the shoulders of the Board of Health by the approaching election, the only apparent relief for these modern Augean stables.

There are, however, two more matters concerning the public health which might well be considered and acted upon by the Board of Health. These were both mentioned in the report of the Committee on Hygiene delivered at the annual meeting of the Medical Society of the County of New York on October 28th. They are the perennial grievance of open cars on the Metropolitan Street Railway in unseasonable and stormy weather, and the acid fumes which make a trip on the 34th street Crosstown cars an undeserved punishment, a foretaste of future possibilities. A letter was sent in the name of the County Society to the President of the Metropolitan road calling attention to the frequency with which open cars are run after the cold season has begun and during protracted storms, and asking for information. With the courtesy frequently accorded to communications which contain nothing of value financially to the recipient, this has remained unanswered. The open or so-called "pneumonia cars" are possessed of so large a carrying capacity that we may be pardoned for sharing a popular opinion that their protracted use without regard to the welfare of the public is dictated by a mercenary spirit.

The acid fumes, arising from the storage batteries of the 34th street branch, are sufficiently annoying to persons in perfect health, but to those with any predisposition to laryngeal or bronchial affections or any one suffering from such troubles, the irritating fumes are enough to bring on an acute attack.

These nuisances are commended to the attention of the Board of Health with the earnest hope that the solution of the difficulties may be satisfactory to the public rather than to the railroad.

ECHOES AND NEWS.

NEW YORK.

Execution of Czolgosz.—The assassin of President McKinley was electrocuted Tuesday morning. The autopsy was conducted by Dr. Carlos F. MacDonald, Dr. E. A. Spitzka and Dr. Gerin, the prison physician.

The skull was found to be of normal thickness. It was the unanimous agreement after microscopical examination that the brain was normal.

The following brief statement was issued:

"The autopsy was made by Dr. Edward A. Spitzka of New York, under the immediate supervision and direction of Dr. Carlos F. MacDonald of New York and Dr. John Gerin, prison physician. The autopsy occupied over three hours, and embraced a careful examination of all the bodily organs, including the brain. The examination revealed a perfectly healthy state of all the organs, including the brain. All of the physicians who attended the execution were present at the autopsy, and all concurred in the findings of the examiners."

Skene Women's Hospital to be Abandoned.—Steps were taken last week in the Kings County Supreme Court for the dissolution of the Skene Hospital for Self-Supporting Women and Children, which was one of the cherished dreams of the late Dr. Alexander J. C. Skene, the well-known Brooklyn gynecologist. The petition for the voluntary dissolution of the corporation was signed by the surviving directors, John Claflin, Hugo Hirsch, Charles A. Moore, president of the Montauk Club; Alexander E. Orr, president of the Chamber of Commerce; George Foster Peabody, Royal C. Peabody, William H. Snyder and Spencer Trask. Judge William B. Dickey ordered a hearing on the matter to-morrow. Dr. Skene was one of the best-known gynecologists in the country, and was a writer and expert upon women's cases. It had long been an idea of his that women and children should have the benefit of expert special treatment, and that many of those who most needed it were unable to pay the large fees of the competent specialist. In order to remedy this he proposed to erect a hospital in which women who had to support themselves and children could be treated without expense. He interested in the matter several of his wealthy friends, and the hospital was incorporated. Before the building which he had planned could be constructed, Dr. Skene died. The directors made up their minds that without its originator the scheme could not be put through, and the action of yesterday was the outcome of the decision.

New York State Association of Railway

Surgeons.—The eleventh annual meeting will be held in the New York Academy of Medicine, Thursday and Friday, November 14 and 15, 1901. The following program has been arranged:

Special Topic: Railway Sanitation.—Car Sanitation, by G. P. Conn, M.D., of Concord, N. H.; Transportation of Passengers Sick with Contagious Diseases, by J. N. Hurty, M.D., of Indianapolis, Ind.; Necessity of Disinfection, by M. J. Rosenau, M.D., of Washington, D. C.; Methods of Disinfecting Cars, by William H. Park, M.D., of New York; Medico-Legal Features, by L. L. Gilbert, Esq., of Pittsburg, Penn.; General Discussion, opened by Walter Wyman, M.D., of Washington, D. C., and C. O. Hunter, Esq., of Columbus, Ohio; President's Address, by W. R. Townsend, M.D., of New York City; Account and Results of a Wreck, by Henry Flood, M.D., of Elmira, N. Y.; Railway Accidents, Their Cause and Prevention from a Psychological Standpoint, by R. S. Harnden, M.D., of Waverly, N. Y.; Contusions of the Abdomen, by Walter Lathrop, M.D., of Hazleton, Penn.; Injuries of the Abdomen, by F. H. Wiggin, M.D., New York City; Contusions of the Abdomen, with Injuries of the Viscera, by L. W. Hotchkiss, M.D., New York City; When to Amputate, by H. P. Jack, M.D., of Canisteo, N. Y.

Dinner to Dr. Waldeyer.—Last Saturday over 100 members and guests of the German Medical Society of New York met to do honor to this celebrated anatomist who recently represented the German Universities at the Yale Bi-Centennial, held the week before last at New Haven. Among the invited honorary guests were Drs. W. H. Carmalt, W. H. Welch, H. M. Biggs, I. Van Gieson, James Ewing, Smith Ely Jelliffe, Frank Foster and G. F. Shrady. Dr. D. von Skal, President of the Society, acted as presiding officer; Dr. Geo. W. Jacoby as toastmaster. Drs. A. Jacobi, W. H. Welch and C. Beck were among the speakers.

A diploma of honorary membership of the "German Medical Society" was presented to Dr. Waldeyer.

PHILADELPHIA.

Presbyterian Hospital.—An addition to the facilities of the Presbyterian Hospital has been made in the shape of a new department just opened for the care of women upon whom abdominal operations have been performed. The building is the Dulles Memorial Ward to which an extension has recently been added. The department is to be under the special charge of a separate corps of nurses who are not to come in contact with other departments of the hospital.

Smallpox.—Cases for the past week numbered 59 (a decrease of 10), and deaths 10, the same as the previous week. There are now 233 cases in the city.

Estate of Dr. Da Costa.—The personal estate of the late Dr. J. M. Da Costa has been appraised at $118,000, of which $90,000 is in life insurance policies. The real estate is believed to be worth as much more.

Powerful Remedy for Smallpox.—During the present epidemic of smallpox the following from a daily paper is of interest whether or not its directions are followed. It is said to emanate from the Sisters of Charity in charge of St. Joseph's Orphan Asylum in this city, and is said to be a substitute for vaccination as well as a cure for smallpox. The prescription is: "One grain sulphate of zinc, one grain of foxglove—sometimes called digitalis; mix with two tablespoonfuls of water; when thoroughly mixed, add four ounces water. Take a teaspoonful every hour for 12 hours."

Pure Food Ruling Excites Manufacturers.—A recent ruling of Dairy and Food Commissioner Cope is causing much comment among dealers and consumers of preserved foods. The ruling is as follows: "Articles of food that can be prepared by the use of improved processes, so as to preserve them from decay or change, shall have no preservative added other than salt, syrup, sugar, saltpeter, spice, vinegar, or wood smoke." This prohibits the use of sodium benzoate which has largely been employed since the use of salicylic acid was prohibited. Manufacturers of preserved foods will probably carry the case to the Supreme Court if the Dairy Commissioner attempts to enforce the ruling.

Philadelphia Association of Retail Druggists.—At the October meeting resolutions were passed commending publicity as the best remedy for the free dispensary evil. The supplying of medicines to the outdoor poor of Philadelphia came under discussion. "The plan agreed on by the Committee and Superintendent Geary, which is to be urged upon City Councils, is that one druggist in each ward is to be selected to fill the prescriptions of the city 'Poor Physicians' for which he will be paid a salary of $200 yearly, and that the drugs used are to be supplied on requisition from the City Hospital as needed and charged to the druggist. At the end of the year the prescriptions and the requisitions for drugs will be compared. If more drugs have been requisitioned for than is shown by the prescriptions to have been used the excess will be deducted from the druggist's salary."

CHICAGO.

University of Chicago Medical Society.—A society with this name was organized October 21st by the University of Chicago. The first meeting was held at the Hull Physiological Laboratory, when Dr. J. Loeb read a paper on "The Influence of the Valency and Possibly the Electrical Charge of Ions upon their Antitoxic Effects." Dr. Albert Peacock also followed with a paper entitled "A Case of Myosis in Man." Dr. Henry H. Donaldson, head professor of neurology, was elected president of the society.

St. Gerard's Hospital Insolvent.—This hospital, which was established about a year ago,

is now declared insolvent, and a receiver has been appointed. The liabilities are $8,300, with assets of $2,400. The projectors of the hospital intended to care for as many charity patients as the patients who pay could support. For several months the charity patients exceeded in numbers those who could afford to pay, and the affairs of the hospital became worse. The income was not sufficient, and contributions practically ceased.

Public Health Matters.—The laboratory investigations of the Chicago Health Department foreshadow an increase of pneumonia and of diphtheria, the germs of these diseases being found with increasing frequency in the examinations. There is also some increase of scarlet fever apparent, especially in the northwestern portion of the city, where all the contagious diseases continue to spread. The outbreak of scarlet fever in Rogers Park has been practically suppressed, only five cases remaining at the close of last week.

Public Hospital of Moline.—The Moline Public Hospital staff has unanimously adopted resolutions asking the Mayor to remove the present board at once, and in its place appoint a board of three physicians. Also to appoint an Advisory Board, to consist of physicians who shall be made regular members of the board as soon as the law can be changed by the Legislature, making the board legally to consist of seven members, instead of three, as at present.

Changes at County Hospital.—Steps will be taken soon to establish a new form of governing body at the County Hospital. An executive cabinet is to be organized, consisting of a physician from each attending staff, a senior interne from each of the different schools of medicine, and the warden. Among the powers the Conference Committee intends to confer upon the warden is that of removing an interne for cause. Stricter rules for the assigning of patients in regular numerical order, so that partiality may not be shown to the attending staff, will also go into effect.

Chicago Medical Society.—At a meeting held October 23d, three papers on obstetrics were read. Colpeurynter in Obstetric Practice.—Dr. Jos. B. DeLee read this paper. After a brief historical résumé the following indications were noted: (1) Induction of premature labor; (2) to hasten delivery, as in eclampsia, premature detachment of placenta, heart disease, etc.; it evokes pains, softens the cervix, dilates same gently and firmly from above and makes delivery possible in a short time; (3) to prepare the parts for rapid delivery, *e. g.*, after symphysiotomy, version, etc.; (4) stenosis and rigidity of the cervix, vagina and perineum; (5) weak pains; (6) in "dry labors"; (7) in transverse presentation to keep the shoulder from wedging into the pelvis while waiting to be able to do version, and in contracted pelvis for the same purpose; (8) when the cord prolapses with the head; (9) during pregnancy to lift up a heavy uterus causing hyperemesis, and to replace a retroflexed, incarcerated uterus, filling the colpeurynter with water or mercury; (10) in placenta previa, perhaps the most valuable of all. The hemorrhage is stopped by the pressure of the placenta against the open sinuses, pains are evoked, the cervix is dilated gently and evenly, and time is given to rally the patient from collapse, to send for counsel and help. When the bag is passing through the cervix, all preparations are made for delivery, for version, etc. As soon as the bag has passed the external os, which is easily determinable, it is rapidly drawn through the vulva and further procedure instituted, which may take the form of forceps, version, another bag, or perhaps even expectancy. The writer is convinced that extended use of the colpeurynter in placenta previa will reduce maternal and fetal mortality to about almost nothing.

Anterior Vertex Presentations; Their Complications and Treatment.—Dr. Gustav Kolischer called anterior vertex presentations those presentations in which the fetal head passes through the pelvis slightly deflected, so that the anterior part of the cranium represents the lowest point of the skull. In cases of pendulous abdomen, where the fetus is the possessor of a struma, anterior vertex presentations are most likely to occur. Internal examination shows that the anterior and posterior fontanelles are on the same level, or that the large fontanelle is situated even lower than the small one. If the head has just passed the pelvic brim, the saggital suture is encountered toward the promontory, and just behind the symphysis we find an ear or the squamous suture. If the head has descended into the median plane of the pelvis, one finds the saggital suture in one of the oblique diameters, while both fontanelles are still located in the same plane. If normal rotation (occipito-anterior) has taken place in an anterior vertex presentation, the small fontanelle is found just beneath the symphysis, while the large fontanelle can be very easily reached in the perineal region. This is due to the deflection in which the fetal head is held. As to the frequency of anterior vertex presentation, comparative statistics from recent sources show that it occurs in about 8 per cent. of all head presentations. In all cases of forceps operations in anterior vertex presentation, he thinks the Walcher's posture can be used to great advantage. On account of the mento-occipital diameter, the perineum is always in great danger, and episiotomy has quite frequently been resorted to.

Occipito-Posterior Positions: Their Diagnosis and Treatment.—Dr. Charles E Paddock said that authorities differ regarding the relative frequency of the different positions of the vertex, but most agree that the occiput engages in right oblique to a large extent, about 30 per cent. of the cases being occipital right posterior, and about 4 per cent. of this 30 per cent. failing to rotate anteriorly and engaging in the hollow of the sacrum. According to

Naegle, who has probably given this subject more attention than anyone else, the head lies in the right oblique in 99 per cent. of all cases. Admitting the frequency of the occiput occupying a posterior position, and knowing the dangers which may result before the case has terminated, it has been the author's experience that the head does not engage as easily in this position as in the anterior one. In O. L. A., for instance, the head enters the pelvis with both parietal bones on the same level, that is, the biparietal diameter of the head passes through a pelvic diameter parallel with and about equal to one of the large oblique diameters. In O. R. P. position, however, this does not occur, and the head passes through a much smaller diameter. While it may not be possible to correct every case by posture, the number of successful ones is so large that every case diagnosed as O. D. P. before labor should be treated as follows: Caution the woman to lie upon her right side at night, and at all times when she is lying down. Each night and morning she should assume the knee-chest position for ten minutes. If the head be above the brim, in but very few cases will this treatment fail. In this position the anterior wall will be lower, the fetus rotating on its long axis, and the dorsum, being the heavier, naturally will seek the most dependent part of the uterus. The knee-chest position allows the head to settle away from the brim. In taking this position, the abdomen must be entirely free of tight clothing. Take another case, when the diagnosis has been made after labor has commenced, but the head still above the brim, the same treatment is often beneficial. The object of position in these cases is not only that anterior rotation may be favored, but a more perfect flexion of the head may be maintained. If flexion is not secured, we have the sinciputal end nearly on a level with the occiput; entering the pelvis in this way, labor is delayed, and when the head settles down, the sinciput coming in contact with the pelvic floor rotates forward and the occiput engages in the hollow of the sacrum, or we get a deep transverse in arrest which calls for artificial correction. While we speak of the occiput rotating posteriorly, we probably should say the sinciput rotates anteriorly Hart's law: Whatever position of the fetal body first strikes the resistance of the pelvic floor, whether it encounters this structure behind or in front of the median transverse line is directed forward, inward and downward under the arch of the symphysis. When the occiput is engaging slowly and the lateroprone position has failed, often much good will result by placing the patient in the Walcher position. There is still another class of cases where the head has engaged in the brim, the os dilated, but no progress being made. In this class the treatment to be first attempted is one which will nearly always succeed.

GENERAL.

Russian Medical Naturalists.—On January 2, 1902 (Dec. 20, 1901, ordinary calendar), the opening of the Seventeenth Congress of Russian Naturalists and Physicians will take place at St. Petersburg. The executive committee is formed of the president, M. le Prof. N. A. Menchoutkine, the vice-president, M. le Prof. A. A. Inostranzeff, the secretaries, MM. les Prof. I. I. Borgman and W. T. Chewiakoff. The Congress will be divided into the following sections: Mathematics and Mechanics, Astronomy and Geology, Physics, Geography, Chemistry, Geology and Mineralogy, Botany, Zoology, Anatomy and Physiology, Scientific Medicine and Hygiene. The Congress will be in session until January 12th. Those desiring to take part should communicate with the Executive Committee (St. Petersburg University).

CORRESPONDENCE.

BERLIN LETTER.

[From Our Special Correspondent.]

BERLIN, Oct. 14, 1901.

THE EIGHTIETH ANNIVERSARY OF RUDOLPH VIRCHOW.

"Homo sum, humani nihil a me alienum puto." These words of the Roman poet Terenz are eminently suitable to characterize the life and the principles of Rudolf Virchow. From the very earliest years of his scientific labors and public work, through all his endeavors until the present day, we can follow one distinct thread, the love of truth. Never bending himself to achieve success through byroads, he enlisted his untiring energy to fight for those principles which he had recognized as the right ones and he never rested on his shield, though he had done work a part of which would have made scores of men celebrated. His watchword was and is, "Excelsior."

His teacher, the great biologist Johannes Müller, enlisted him into the little army which fought against the mystic speculation of natural philosophy in medicine. Johannes Müller's school was strictly the school of positivism and nobody was more enthusiastic to follow the path of his teacher than Virchow.

The fruits of his earlier labors are our knowledge of embolism and thrombosis, leucemia and septic infection, but he crowned his work and covered himself with immortal glory, when in 1858 he uttered the little sentence *"Omnis cellula a cellula,"* and with these words laid the foundation of the principles of modern pathology, that branch upon which our entire modern medicine is resting. Men will come and go, empires and kingdoms may appear and disappear, but Rudolf Virchow's name will live forever and his lifework will be the admiration of the coming generation.

To this man equally as eminent as anthropologist, hygienist and statesman, as he is in medical pathology, have come the representatives of the civilized world to celebrate his eightieth birthday.

The celebration was divided into two parts. In the afternoon the inspection of the pathological

museum and an address by Virchow; in the evening the greeting and congratulations of Virchow's friends and admirers in the second chamber of the Prussian diet, a member of which he has been for decades.

At two o'clock the invited guests assembled in the aula of the pathological museum. The meeting was representative and international. England had sent Sir Joseph Lister and Sir Felix Semon; Italy, Professor Baccelli; France, Senator Prof. Cornil; Austria, Prof. Toldt; Russia, Botkin; Holland, Stockvis; Norway, A. Hansen. A tremendous applause greeted the master when he addressed the meeting. After a few well-chosen words of thanks, he spoke as follows: "While the scientific explorer enjoys such success in his work as he may achieve, it is only an impetus to new efforts and he is fully aware that what is to-day accepted as true and a fact, might be overthrown to-morrow." He then went into the history of medicine. "It appears impossible to go back to its beginning, so old it appears to be." A general description of the medical affairs in ancient Greece and Rome, the medieval medical school of Arabia, the Italian universities of Bologna and Padua during the fifteenth century and the entrance of Germany into the field of medical research followed. Two currents existed there; the one, which represented the Arabian doctrines, was led by Paracelsus, the other by Vesalius, the founder of the anatomy of the human body. It is he who might be called the father of pathology. Not death alone, however, but life itself and its changes demand the the attention of the pathologist and pathology belongs to the domain of biology. It would be erroneous to call pathology the teaching of disease. Pathology has no limit and even the field which deals with descendency belongs to its realm. Pathologists at the present time are at work to ascertain the border between formation and metaplasia. Pathological museums collect the proofs of facts found and demonstrated possibilities are of no material value. In olden times superstition and mystical speculation were the helpmates of the anatomist, where his deficient knowledge failed to explain. Especially was this the case in regard to monstrosities. These were considered the work of the devil. It was Meckel who with his embryonic study overthrew this belief. Another field which caused much trouble was the study of parasites living in the human and animal economy. We know now that only life can cause life." At the close Virchow remarked that the new museum should not only serve science alone, but should also be a source of popular instruction.

The next speaker, Surgeon-General Schaper, the director of the Charité Hospital, praised Virchow as the prince of science and a public benefactor. Hereafter demonstration of bacteria and parasites with the projection apparatus and an inspection of the different departments of the museum followed. This closed the afternoon celebration. The evening celebration in the great meeting hall of the Prussian Diet was probably the most imposing ovation which has ever been given to a man of science. The hall was profusely decorated with flowers, and governments and private societies, learned bodies from far and near, universities and cities had sent their representatives to give voice in word and deed to the admiration in which they hold the scientist, the thinker, the patriot and the statesman. At nine o'clock the trumpets announced the arrival of Rudolf Virchow, who was led to the seat of honor by Prof. Waldeyer, who is now on his way to the United States, where he will represent the Berlin University at the two hundredth anniversary of Yale University. He named as honorary presidents of the meeting the following: Minister of Public Instruction Studt; Minister of Agriculture v. Posadowsky; Surgeon-General of the Army v. Leutoldt; Professor Baccelli, Rome; Lord Lister, London; Professor Cornil, Paris; Professor Botkin, Petersburg; Professor Toldt, Vienna; Professor Stockvis, Amsterdam; Professor Hansen, Bergen; Professor v. Recklinghausen, Strassburg; Professor v. Bergmann, Berlin. He then with words of the highest praise, in which he called Virchow the benefactor of the whole world, handed him fifty thousand marks publicly collected for the purpose of the strengthening of the "Virchow Stiftung." Upon him followed the Minister of Public Instruction, who brought a letter from the Emperor and the Gold Medal for Science. Then came the deputies of the Medical Department of State and Ministry of War, the Academy of Science and other learned and scientific bodies to bring addresses and congratulations; and hereafter greeted with great applause the Italian Minister of Agriculture, Professor Baccelli, who delivered a Latin oration, the translation of a portion of which is as follows: "This day, on which in Berlin, the center of science, the highest honors are given to you, Rudolf Virchow, is the day of glory for the world's medical science and the day of happiness for the land of your birth, Germany.

"When your brow is crowned to-day with immortal laurels, this day is the day of justice and for us a day of the purest pleasure. For this reason I was sent to this assembly of illustrious men, who admire you and congratulate you, to tell you what Italy feels for you. First, I speak in the name of our beloved King, Victor Emanuel III., who from a strong and noble ancestry is by his own individuality drawn toward every great virtue, wherever it might appear. Furthermore the Ministers of Instruction and Medicine wished to congratulate you, but, more than anybody else, is Joseph Zanardelli, the successful liberal government leader, anxious to express his joy that you, the beaconlight of science, are unbent by your eighty years and in full manly vigor and strength.

"The science and methods of pathological anatomy, which were first taught in Italy by John Baptist Morgagni, you have, with never equaled wisdom, perfected in your German Fatherland and carried to such height that rightly you may

be called Teacher of Teachers. This the Italians desired to express in this picture and I have inscribed it with the following hexameter: *'Ut gnos corda fovent praesentes lumina spectent.'*

"Hail to you, Rudolf Virchow! May you reach Nestor's age, healthy and happy, an ornament of your country, protector of the human race, admired by all nations, but beloved of Italy, you the Immortal!"

Here Bacelli handed Virchow a most artistically-executed medal and a painting upon which Morgagni and Virchow are represented side by side.

It would take more space than you will allow me to mention all the deputations which followed with their congratulations and I may only be permitted to repeat what the French pathologist, Prof. Cornil, said:

"Dearest Master: Forever you have proclaimed in your work the principles of liberalism, based upon science, the foundation of all progress. You have inaugurated a new pathology, based upon the study of cellular lesions. You are the counselor of the cities in their desire for better hygiene. On account of all this, your friends from Paris bow down before you in loving veneration and wish you a long continuation of your admirable career."

It was long after midnight and long after the proposed time when the celebration ended, and everybody admired the splendid strength and activity of the great man. O. WATERMAN, M.D.

SOCIETY PROCEEDINGS.

NEW YORK STATE MEDICAL ASSOCIATION.

Eighteenth Annual Meeting, Held at the New York Academy of Medicine, October 21, 22, 23 and 24, 1901.

SECOND DAY—OCTOBER 22, 1901.

(Continued from Page 680.)

Malignant Disease of Nose.—Dr. Joseph D. S. Gibb of Philadelphia said that primary carcinoma of the nasal passages is rare. Primary sarcomata of nasal structures is not, however, so rare. As a rule these malignant tumors remain unidentified until it is too late to think seriously of radical operation. Their early diagnosis is an important desideratum. One of the very early symptoms is frequent epistaxis. In nearly every case this symptom was present a considerable time before other symptoms developed. In young persons in whom without special reasons there develops a tendency to bleeding from the nose, careful examination of the nasal chambers should be made, and if unusual conditions of bulging beneath the mucous membrane are found, suspicion should be aroused. When sarcoma of the nose runs into the ethmoid cells hideous deformity is apt to result. It is in these cases especially that the so-called "frog face" is seen. After the growth overruns the ethmoid cells it may find its way into the orbit and force the eyeballs outward. In these hopeless cases of nasal sarcoma the use of Coley's fluid would seem to be especially indicated. It has been employed in two cases, in one of which after two operations there was recurrence of the growth. In this case cure followed, but it was not attributed to the mixed toxins, but to the last operation. In the other case no effect was produced by Coley's fluid.

Distribution of Sarcomata.—These tumors occur by preference in the nasal chambers of males. Out of 96 reported cases 57 were in male subjects. Sarcomata used to be considered especially liable to occur in the young. Recent statistics show, however, that quite as many cases occur after forty as before forty. The absolute diagnosis can only be made with a microscipe after the removal of a whole or part of the tumor. Partial removal of the tumor is condemned by many surgeons, because it is liable to irritate the malignant elements of the tumor into increased activity. Microscopic diagnosis is not easy and not always assured. In certain cases where the pathology has pronounced the fatal word malignancy, the course of the case has subsequently proved the tumor to be of some other variety. At times, unfortunately, when the microscope has seemingly furnished evidence of non-malignancy, a fatal issue has occurred.

Cancer of Large Intestine.—Dr. James Tuttle of New York said that cancer of the intestine, as of all other parts of the body, used to be said to occur mainly in old people. In recent years, however, there have been reports of an increasing number of cases in the young. In New York the Board of Health reports show in recent years 17 cases of intestinal cancer in children under five years of age, 21 under ten years of age, and altogether nearly 200 in people under thirty-five years of age, which was formerly supposed to be almost the lower limit of age for cancer. Dr. Tuttle considers that it is the age of the tissues and not of the individual that lends itself to malignancy. In cases where precocious senility of any tissues develop there is liable to be malignant degeneration.

Types of Intestinal Cancer.—Epitheliomata of the intestine are not apt to produce constipation, especially not early in the case, and do not, as a rule, give rise to blood or pus in the stools. The main symptom is a nagging dyspepsia with intermittent tendencies to diarrhea and the development of cancer cachexia. Such cancers are apt to be insidious in their development and may produce extensive invasion before there is enough discomfort to lead to their discovery. Scirrhus cancer of the intestine is apt to produce stenosis of the lumen of the intestine and obstinate constipation. It is not long, under these circumstances, before there is ulceration and breaking down of tissue. Such cancers are apt to produce a febrile course. The temperature is not, however, due to the cancer itself, although this is sometimes said to be the case, but is due to the failure of movement on the part of the feces, with consequent absorption of fecal material and other toxic agents. Dr. Tuttle has verified this in the rectum, thereby keeping such cancers abso-

lutely clean. The existence of temperature has been prevented.

Operations for Intestinal Cancer.—Operations for cancer may involve the removal of the affected part or are done simply to alleviate symptoms. Artificial anus, for instance, is often made and often gives great relief to symptoms. The statistics of the operation show a large fatality. But this is because the operation is not one of choice, but of necessity, and is done as a rule only when the patient is in very bad condition.

Malignant Disease of the Penis.—Dr. Henry H. Morton of Brooklyn said that carcinomata of the penis originate usually in abrasions of an overlong foreskin. Circumcised Jews are said to be almost free from the disease. People who exercise care in washing the foreskin so as to leave no irritant beneath it are very seldom affected by cancer of the penis. The affection occurs especially in the lower walks of life, in which precautions of cleanliness are neglected. All erosions of the foreskin that are obstinate to treatment should be regarded with suspicion. If the edge is hard and there is hardness beneath the lesions, it is almost surely cancer. Gumma may be mistaken for cancer. Here the therapeutic test should be employed. Death usually takes place in two years if the tumor is not removed. Caustics only excite the tumors to greater activity and do harm. If the tumor is large the whole penis should be removed.

Ethyl Bromide and Ethyl Chloride.—Dr. S. Ormond Goldan of New York read a paper on these substances as surgical anesthetics and described and exhibited apparatus for their administration. He considered that they are more dangerous than ether or chloroform and are suitable, as a rule, only for minor operations. They do very well in taking the place of nitrous oxide at the beginning of anesthesia. Dr. Goldan considers that ethyl bromide is safer and more economical than ethyl chloride.

Ethyl Chloride as an Anesthetic.—Dr. James P. Tuttle of New York gave some details of his experience with 230 cases of anesthesia by means of ethyl chloride. He does not consider it in any sense of the word a dangerous anesthetic. It certainly is not, as Dr. Goldan said, more dangerous than ethyl bromide. Two surgeons in New York have communicated to him the details of two deaths that have taken place from the use of ethyl bromide. In other cases there have been serious annoying symptoms. There have been over 2,000 cases in which ethyl chloride has been employed. Not only have there been no deaths, but there have not even been any dangerous symptoms. If the anesthetic is used carefully it is an ideal method of producing narcosis for minor operations.

Apparatus for Anesthetics.—Dr. Tuttle does not approve of any of the new-fangled apparatus for the administration of anesthetics. The recently-introduced French apparatus have valves that are constantly rusting or buckling, or getting out of order in some way that makes them a nuisance just in the midst of the operation. He uses the old-fashioned inhaler and for short operations now uses in most cases ethyl chloride. This agent does not produce as much relaxation of the muscles as chloroform or ether, but is quite sufficient for such purposes as stretching sphincters or opening abscesses.

Inconveniences.—It is quite as frequent to have nausea after ethyl chloride as after nitrous oxide. Neither anesthetic must be employed with the idea that after vomiting will surely be prevented. The principal advantage of the use of ethyl chloride is the rapidity with which patients come under its influence. Fifteen or seventeen minutes are not required for its administration, but only five to seven minutes.

Advantages.—Besides the distinct benefit of a shorter preliminary stage ethyl chloride can be administered much more easily than nitrous oxide, because the apparatus required is not as cumbersome as that for nitrous oxide. It can be used in conjunction with ether and chloroform, and it is Dr. Tuttle's experience in this matter that has shown the profession how helpful it may be as a preliminary anesthetic.

Perforation of Gastric Ulcer.—Dr. U. W. Hotchkiss of New York reported a case of perforation of gastric ulcer successfully operated upon sixty hours after the perforation had taken place. The patient was a domestic, about thirty years of age, and for some six weeks before the development of acute symptoms complained of flatulence and general dyspeptic symptoms. A painful condition developed that affected most of the abdomen, but was relieved promptly by a cathartic. Afterward there were return attacks of rather severe pain in the left abdominal region. Two nights before her admission to the hospital she had gone to bed feeling perfectly well and was awakened from sound sleep by an intense pain localized mainly in the upper abdominal region. There had been a movement of the bowel on the day before the occurrence of the pain. But for some time before that constipation had been the rule. The painful condition became more diffuse and was accompanied by collapse. As her symptoms continued to increase despite ordinary remedies she was removed to the hospital. When admitted her abdomen was found to be generally tender, to be swollen and the muscles tense and rigid. Her temperature was 103° F., her pulse 132. Distinct symptoms of collapse were present. As constipation seemed to be a principal element in the case she was given a hot enema containing some ox-gall and glycerin. Improvement set in almost at once. The patient was so much better that the attending physicians were sure that mechanical delay of the feces was the principal element in the case. After about three hours, however, her painful symptoms came on again and she was given another enema. This was followed some time afterward by a natural movement that gave great relief. Relief was, however, only temporary and, as the pain returned and with it signs of collapse, the suspicion was aroused of the per-

foration of a gastric ulcer and an exploratory incision was made.

Operation.—The opening of the peritoneum was followed by the escape of gas and by some yellowish sero-purulent fluid. There was intense congestion of the serous covering of the stomach and here and there in the peritoneum flecks of fibrin occurred. The perforation was found in the anterior wall of the stomach and pockets of exudative peritoneal fluid were found scattered through the peritoneal cavity, behind the liver and spleen and along the intestine. Around the opening in the stomach the thickened edges showed that the ulcer had existed for a long time and as there was considerable necrotic tissue around it, it was thought better not to do a resection nor to attempt to bring the edges of the ulcer together, but to turn in the wall of the stomach and secure serous surfaces together by a double row of Lembert sutures. The general peritoneal cavity was then washed out with hot saline solution until the fluid came away perfectly clear. A liter of the solution was left in the abdomen when the abdominal incision was closed. Three days after the operation the patient developed a swelling of the parotid gland. This proved to be an attack of ordinary mumps. The children of the family in which she had been employed had had them before her entrance into the hospital. Otherwise there was no incident in her recovery. She was fed entirely by the rectum for a week and recovered after five weeks. Since then she has had no dyspeptic symptoms nor any discomfort of gastric origin.

Diagnostic Data.—The principal diagnostic data in these cases are the pain and the tendency to collapse after symptoms of an ulcer of the stomach have been present. When gastric ulcer is latent, as so often happens, then when suspicious symptoms occur, the only thing to do is to make an exploratory incision, and this is the best diagnostic method at our command. Ulcer of the stomach occurs more frequently in males, and especially in those over forty years of age. Ulcers are more frequent on the posterior wall of the stomach, but perforation occurs more frequently on the anterior wall. The statistics of ulcer of the stomach are not, however, quite complete as yet. The last collection of cases reported shows that more ulcers occur on the anterior wall.

Medical Abuse of Alcohol.—Dr. Frank Wellington Dennis of Unionville called attention to the fact that doctors not infrequently abuse alcohol as a remedial agent. Alcohol is really an excrementitious product formed while yeast grows in a sugar solution. It is a result of retrograde change and is capable of poisoning the yeast that it produces if in strong enough solution. It is undoubtedly harmful to healthy human beings and a drug that is destructive in health can not be reconstructive in disease. People who do not use alcohol have, at the age of twenty, ten years more expectation of life than those who use it freely. Insurance societies composed of total abstainers have to pay a much lower rate of assessment than others. The routine practice of medical men in this matter of advising the use of alcohol is a mistake that should be eradicated in this twentieth century.

Pelvic Inflammation.—Dr. Abraham Brothers of New York said that the old idea of pelvic inflammation seemed to be best conveyed by the description of an old gynecologist, who said that it was as if plaster of Paris had been allowed to set. Pelvic inflammation should not be considered as a separate entirety, but should always be traced to its cause. It is the treatment of the cause that is important. It comes either from the uterus through the tube, or by continuity of tissue, or through the lymphatics. There is always some single focus of origin to which all the inflammatory conditions can be traced. Usually this is an endometritis, purulent salpingitis or an appendicitis.

Frequency.—More than one-half of child-bearing women carefully examined at autopsy proved to have some pelvic inflammation. For this there are two main causes, puerperal and gonorrheal infection. Usually there is pain on the affected side, from which the inflammatory condition in the pelvis is derived. Sometimes, however, the pain is referred to the other side. Extensive changes may occur in the pelvis without the development of symptoms. When exudates persist for a long time they nearly always contain pus. Sometimes they remain quiescent for very long periods. In one case nineteen years of quiescence was reported.

Treatment.—The line of demarcation in treatment is between cases with and without pus. Where pus exists surgical treatment is absolutely necessary. For parametric conditions, not suspected to contain pus, ordinary local treatment is often of very great service. In the hands of careful conservative observers, non-purulent inflammatory conditions can be made to disappear by the use of douches, local applications and care of the bowels.

Special Skin Diseases.—Dr. Grover W. Wende of Buffalo exhibited a series of skin diseases with lantern illustrations. He brought out the change that has taken place in cases of impetigo contagiosa in the last few years. From simple blebs with tendencies to crust formation, the lesions have now become ring-shaped in character without much crusting. Other cases of interest were pompholyx, dermatitis herpetiformis pustolosa and X-ray dermatitis. In a case of X-ray affection all the skin of the hand of an operator, including even the nails, was completely destroyed. In another case an ulcer of the foot had lasted for two years and a half and the intense pain shows that there is also some involvement of the periosteum of the bone.

THIRD DAY—OCTOBER 23, 1901.

SYMPOSIUM ON ARTERIOSCLEROSIS.

Etiology.—Dr. Charles E. Nammack of New York said that the causes of arteriosclerosis are, in addition to the acute infectious diseases, cer-

tain chronic intoxications such as are produced by chronic gout, lead or other metallic poisoning, alcohol or syphilis. The direct cause of the degenerations in the arterial system is due to the narrowing of the small vessels, which throws more work upon the heart and then this reacts upon the arteries. The initial period of the disease is always a contraction of the peripheral circulation. Without this, arterial degeneration does not develop. Over-feeding is a frequent cause of arteriosclerosis, yet geese may be fattened in order to provide livers for the gourmand and pigs may be fattened for market without the production of arterial degeneration.

Psychic Elements.—Though labor delighted in may physic pain, it is mainly overwork that leads to precocious degeneration of arteries; worrying over work is especially serious in this matter, for worry, not work, kills. Physicians are especially prone to suffer from it, though the public does not give them credit with worrying much over their patients. The death-rate of doctors in New York City is only surpassed by that of three classes of people—saloon-keepers, whose occupation is fatal; butchers, who are gluttons, and quarrymen and factory operatives, in whom the dangers of their occupation and poor living make the mortality-rate high. Doctors die particularly from three diseases connected with degeneration of the arteries—Bright's disease, apoplexy and heart-disease.

Symptomatology.—The history of a case of arteriosclerosis does not begin a few weeks before the patient comes to the doctor, but often from the very cradle. Extensive degeneration of arteries may exist without symptoms, though the inevitable breakdown is always preparing. Among the earliest symptoms that brings his condition to the attention of the patient are distress in the region of the heart and pain in the left arm. There often develops a disinclination to work, especially at the occupation which has perhaps been the delight of earlier years. Headaches are easily brought on as the result of indulgence in tobacco and coffee. When these symptoms develop the city doctor must sell his horse and get out into the air and take more exercise. He must deny himself his glass of wine at dinner and take a longer summer vacation, where he will not permit himself to be tempted into doing any of the work of the local practitioner. Outdoor air is better than iodides to widen the arteries, and this is the important prophylactic against the terminal stages of the disease. Herbert Spencer has defined life as a continuous adjustment of internal relations to external relations. This, the patient who finds himself in the early stages of arteriosclerosis must learn to do.

The Heart in Arteriosclerosis.—Dr. Delancey Rochester of Buffalo said that the degeneration of the arteries obstructs the outflow of blood from the heart because of the loss of elasticity. And yet the work thus thrown upon the heart soon causes failure of the nutrition of myocardium. Bouchard has shown that degeneration fragmentation and even atrophy of the cardiac muscle fibers take place. The valves also become affected, first the aortic and then the mitral. Then the development of arteriosclerosis in the coronary arteries leads to angina pectoris. Dr. Rochester detailed certain cases of arteriosclerosis in some of which attention was called particularly to the fact that the most common symptom was epigastric pain. This leads to the diagnosis of gastritis when the real condition was circulatory degeneration.

Treatment.—In Dr. Rochester's experience digitalis is always a dangerous drug in arteriosclerosis, and he finds cactus and valerian much more useful without the attendant risk. When digitalis has to be used he prefers Merck's digitalin. Morphine may have to be employed in cases where pain becomes the most prominent symptom. In one case, where the pain of angina pectoris continued for a long period, ether had to be employed. The main indication is to treat the patient's general condition. The diet must be carefully regulated, all sources of worry must be removed, gentle exercise must be insisted upon and where a heart compensation has failed the patient must be put to bed. In these cases the use of resisted movement, as employed by Schott at Nauheim, is of very great importance. This adds to the muscle tone and soon relieves the condition. Better than digitalis or any other of the supposed heart stimulants is nux vomica. If it is desired to produce the same effect by hypodermic medication strychnine should be employed.

Management of Arteriosclerosis.—Dr. Egbert LeFevre of New York said that the frequent diagnosis of heart failure in recent years shows that the medical profession has come to recognize the existence of a serious condition of lack of power in the circulatory system for which no single adequate pathological lesion can be found. The question of how to prevent its occurrence is one of the most important of present-day medicine. The conditions that develop with degeneration of arteries, the sclerosis of the kidneys and the enlargement of the heart, are evidently all to be classed together. The most important factor in their development is age. Not that advancing years inevitably bring on arteriosclerosis, or that the degeneration of arteries always correspond to the age. Men of seventy may possess better arteries than others of forty.

Etiology.—Undoubtedly the most important factor in the production of the disease is the hereditary predisposition to early degeneration of arteries. There are families in whom cardiovascular symptoms develop comparatively early in life. On the basis of predisposition there are certain elements that are especially active in causing arteriosclerosis. Chronic poisonings, such as are due to lead or alcohol, the intoxication of indigestion, or such diseases as gout and syphilis, are undoubtedly active in this matter. The mechanism of their action would seem to be the production of peripheral spasms in the blood-vessels

with consequent increase of the work for the heart and the larger vessels. Gradually this peripheral spasm lasts longer and forcible heart action with discomfort to the patient, especially after meals, or the systolic movement of the heart may be felt in the head. The first effect of toxemia is an hypertrophy of the muscular coat of the arteries. Toxemias are more apt to develop and to become exaggerated after middle life. A man of forty-five and over is more sedentary in his habits, the function of many organs is disturbed and the lack of exercise causes the failure of excretion of irritating substances. In these cases the underlying tendency to early degeneration of arteries is as important as the tendency in certain families to the development of tuberculosis.

Special Treatment.—It is especially important that persons suffering with beginning arteriosclerosis should not be without occupation. If the condition known as lithemia, or masked gout, develops and the patient is leading a very active life he may have to change his occupation. In a word, the keynote of success in the management of arteriosclerosis cases in their primary stage is specific control of the amount of exercise to be taken and absolute regulation of the diet. Overalimentation is the rule among older people of sedentary occupation and, together with a more luxurious diet, there comes the craving for richer food with consequent dyspepsia. For the depression incident to indigestion stimulants are taken and so a vicious circle of deleterious influences is formed. If the patients have distinct heart symptoms they are usually ready to listen to the advice of a physician. But at times the storm signal of cardiac disturbances does not come and patients are very hard to manage. If the patient has been accustomed to alcohol for a good while and a certain amount of stimulation seems necessary, then he should be limited to the use of whisky. While the amount of food taken must be limited, limitation must not go to such a degree as to cause impairment of nutrition. Loss of weight is a bad sign. Instead of limiting the diet too much there should be an increase of excretion by the emunctories. For this blue pill and salines should be taken symptomatically.

Drug-treatment.—Grey powder and quinine, of each three grains, should be taken at intervals of three weeks to a month. Between times the bowels should be kept open by means of Carlsbad salts or sodium phosphate. The drug-treatment of the early stage of the disease is not as important, however, as that of later stages, the main purpose being to slow the degenerative process.

Management of the Second Stage.—This stage of arteriosclerosis is the consequence of marked obstruction in the arterial system, with consequent cardiac hypertrophy. The patient is apt to feel the thumping of his enlarged heart. The first lesson is to keep up the heart compensation, for, if the circulation fails, a vicious circle is formed and the condition is rendered inveterate. All violent exercise should be avoided because of the call it makes upon the circulatory system. There should be a simple nutritious diet and no overloading of the stomach. Acute dyspeptic attacks are not infrequent and are best relieved by purgatives. For the feelings of discomfort that develop in the precordial region the nitrites gives transient relief and nitroglycerin for a little longer. After the nitrites there is always a reactionary increase of tension in the peripheral blood-vessels and so the use of these remedies should not be continued over long periods. Iodine and its salts are said to be the drug of arteries. It lowers blood-pressure without decreasing the force of the heart. Five to fifteen grains of an iodide three times a day renders blood-pressure lower and more constant and does not allow it to be easily disturbed by reflex irritation. Pharmacologists say that the iodides have no specific action on the arteries. They produce their effect, however, and probably act through the nervous system. The salt of iodine to be employed depends on the condition of the patient. Potassium iodide is most depressing, and should not be given whenever there is cardiac insufficiency already existent. Hydriodic acid is the least depressing and serves best whenever there is gastric irritability. It may be given in the syrup of hydriodic acid in doses of two to four drams three times a day. Compensatory hypertrophy is Nature's remedy for the arterial degeneration, but Nature is too prodigal in the matter and the consequent discomfort may be lessened by cold to the precordium. Sparteine sulphate in doses of one-eighth of a grain is a good heart tonic without being a stimulant in these cases.

Heart Stimulants.—All heart stimulants should be used carefully. If heart compensation is good, digitalis is contra-indicated. In failure of compensation this is of great value. It should be given for a week, or even for a month if needed. Small nightly doses three or four times a week serve to keep up the heart nutrition. Iron and cod-liver oil should be given freely and in general nutritive remedies employed as soon as any retrograding of the general condition is noted.

In the discussion, Dr. Quimby of New York said that the important element of these cases is to keep up the nutrition of the heart and blood-vessels. While inheritance plays a prominent rôle in these cases much of the tendency to degeneration is acquired. The fibrous change that is noted in heart and blood-vessels comes only when there is failure of nutrition. Fibrous tissue lives at a lower stage of nutritive vitality than muscular tissue and so replaces the muscular tissue when conditions are not favorable to the life of the muscle cells. Fibrosis in these cases is, then, rather a pathetic than a pathic change.

Heredity and Degeneration.—Dr. James J. Walsh of New York said that heredity, not by actual transference of diseased conditions from

one genertion to another, but by transmission of the tendency to degeneration, is undoubtedly the most important factor in these cases. Longevity is eminently a matter of family peculiarity. Only those live long whose ancestors have lived long. Early degeneration of arteries in one generation portends a like condition in the next. It is worry, and not work, that kills. Children of parents whose arteries have degenerated early in life should not be allowed to take up occupations that are especially liable to be accompanied by emotional disturbances. The family doctor should advise such people from being brokers or actors or even perhaps doctors, since, as Dr. Nammack has pointed out, the physician's life is liable to be so subject to worries.

Arteriosclerosis and Neurasthenia.—Neurasthenia is a word that in our day covers a host of various affections. Neurasthenia pure and simple, that is, functional deterioration of the nervous system as the sole basis of symptoms, is not nearly so frequent as has been thought. Very often it will be found that the vague pains complained of by neurasthenics, the tendency particularly to constriction of the thorax with more or less localization of the discomfort in the precordial region, are usually due to some disturbance of the circulatory system. In dispensary work, especially among patients who came originally from the center of Europe, there are many cases of apparent neurasthenia. Patients have been accustomed to an absolute outdoor life in Europe, and here in sweatshops and tenements live an absolute indoor life. This rightly forms a basis for true neurasthenia, yet very seldom will cases be found in which there is not some organic basis for the disease. Early degeneration of arteries in the hurried bustle of American life is the true American disease rather than neurasthenia.

Cardiac Pain and Gastralgia.—Dr. Charles G. Stockton of Buffalo said that it is not an unusual thing to find a case of acute dilatation of the heart associated with so much pain that it is considered to be true gastralgia and the patient is treated for gastritis. This may be the only symptom severe precordial pain. Very often the severe symptoms come on only after very extensive degeneration of the arteries has taken place. Dr. Stockton has seen a case in which rupture of the heart has taken place, with so few preliminary symptoms of cardiac disturbance as to make it a distinct surprise.

Corrosive Sublimate.—Dr. Frank W. Higgins of Cortlandt said that Professor Thompson used to advise corrosive chlorate of mercury in small doses for cases of arteriosclerosis and consequent circulatory symptoms. This is an old remedy, but Dr. Higgins has found it more satisfactory than many a drug of more recent suggestion. Of late, Dr. Higgins has tried bromide of gold and arsenic in these cases, but his results have not been very satisfactory and he would like to know how they had acted when administered by others.

Employment of Digitalis.—In closing the discussion, Dr. Nammack said that digitalis was not indicated in the first stages of the disease, but that in the third stage, when failure of compensation occurred and dilatation of the heart with ascitis and other accumulations of serous fluid in the tissue, it is the most important drug that we have. With regard to the mercurials, he prefers calomel to the corrosive chloride of mercury, and usually uses it in conjunction with digitalis and squill in the form of the well-known Niemeyer pills, this remedy with sulphate of magnesia gives great relief in these cases. The mercurial, of course, must be used intermittently and then the infusion of digitalis is employed.

Dr. Delancey Rochester said that in the terminal stage of arteriosclerosis, with collections of fluid in the body cavities and the areolar spaces, the patient needs rest and not digitalis. The patient should be put to bed and all the arteries should be relaxed. The emunctories should be thoroughly opened. Fluids should be removed by excretory methods or by cannula. Instead of digitalis, Dr. Rochester uses the fluid-extract of cactus, Merrill's preparation, though this is not employed continuously. Nux vomica is employed as a heart tonic and is much better than any heart stimulant. Dr. Rochester's experience with arsenic and gold salts has not been satisfactory.

Dr. LeFevre does not believe in digitalis in heroic doses. In small doses it undoubtedly does good. Nux vomica is of service in these cases, but it acts not directly as muscle tonic, but as a nerve tonic. By its use we cannot increase the nutrition of the heart muscle, as we can with digitalis. The careful use of digitalis undoubtedly prolongs life.

Blood-examinations in General Practice.—Dr. Frank W. Higgins of Cortlandt described some methods of blood-examination that may be used by the general practitioner and detailed the information that could be derived from them. For the specific gravity of the blood he considers Hammerschlag's method reliable and practical. A mixture of chloroform and benzine is used, the amount of the two ingredients being so regulated that a drop of blood will just float in the mixture. The specific gravity of the mixture will then be the specific gravity of the blood. Care must be taken that no air clings to the drop of blood and the determination must be made before any changes have been induced in the blood by the chloroform benzine. There should be no water on the top of the mixture or this will cause loss of hemoglobin and consequent disturbance of the specific gravity. There are rather wide variations in the specific gravity of the blood in health. The specific gravity of the blood corresponds very closely to its hemoglobin contents.

Hemoglobin Determination.—The methods for determining the amount of hemoglobin in the blood are the least accurate in scientific blood estimation. It depends on the recognition of fine

gradations of color and males do not possess a good color sense. Fleischl's is the best instrument for the purpose. The determination of the hemoglobin in the blood is of value in the differential diagnosis of pernicious anemia from cancer. In pernicious anemia the amount of hemoglobin present is more than would be expected from the number of red cells present. The only diagnostic method for the recognition of leucemia is by counting the white cells present in the blood. The number of white cells also decides the amount of leucocytosis, and leucocytosis has become an important diagnostic feature in recent years. Whenever acute suppuration takes place in the body, leucocytosis showing 12,000 to 50,000 white cells per cubic millimeter is to be found. In intestinal perforation in typhoid the occurrence of leucocytosis is almost pathognomonic, because typhoid fever itself is almost the only acute infection in which no leucocytosis takes place. Leucopenia, that is to say, a lessened number of white blood-cells than normal, occurs in intense septic infection and is sometimes of service in the diagnosis of cases where it is difficult to obtain a history. In blood-counting the leucocytosis that occurs after anesthetics is transient and so is not liable to produce confusion with septic conditions. In conditions of abscess or gangrene the leucocytes are always increased in number. In pneumonia marked rise in the number of leucocytes indicates a favorable prognosis. This is not a difficult procedure and is extremely important for the diagnosis of anemic conditions. In pernicious anemia the red cells are found distorted and poikolocytosis always means a grave anemia. The presence of megaloblasts, that is, of large red cells containing nuclei, is an index of a fatal type of anemia. For blood staining Erlich's tri-acid solution is the best. When this is carefully applied and the staining is good and clear, a lens with a one-fifth of an inch focus is quite high enough power for the study of the stained cell. The differential blood-count is not difficult and sometimes gives precious information in annoyingly obscure cases. Eosinophilia is a pathognomonic sign of trichinosis and justifies the cutting out of pieces of muscle for examination for the parasite.

Simple Blood-method.—Dr. Richard C. Cabot of Boston said in the discussion that he was a general practitioner himself and that any general practitioner might readily study the blood to advantage. For the determination of the hemoglobin in blood he considers that Talquist's apparatus is quite sufficient; it costs a dollar and a quarter and the examination takes about five seconds; it is accurate to at least within ten degrees. The determination of the specific gravity in the blood is not of sufficient clinical value to make it worth while. The presence of leucocytosis may mean pus and taken in conjunction with other symptoms it must not be considered of itself, however, absolutely to denote the presence of a purulent condition.

Tuberculous Glands of the Neck.—Dr. Syms of New York read a paper on the conservative surgery of tuberculous glands of the neck. Dr. Syms does not believe in the radical operation save in certain selected cases. It does not save scars, but replaces several small scars by one long, and usually much more noticeable, scar. The so-called radical operation also increases the danger of general infection and it decreases the resisting power of the individual at a time when there may be little resistive vitality. The radical operation has a place in surgery if glands are breaking down continuously and fresh glands are progressively infected and if the general health is being undermined by the pathological process that thus persists. The most important thing is the general treatment of the patient's conditions. They should be advised to be out-of-doors all the hours of sunshine, they should sleep with the windows wide open and be well covered, and should have a warm room in which to dress and undress. Their digestion and bowels should be carefully regulated and milk should be given between meals and on retiring. They should be given the syrup of the iodide of iron, and should be made to retire early and sleep long.

Local Treatment.—When glands become enlarged they should be covered with a ten-percent. ichthyol ointment at night and this should be washed off in the morning. If one or more glands remain obstinately enlarged these should be removed. If glands begin to break down an incision should be made into them before the capsule ruptures. A surgeon should be careful not to permit the development of periglandular infective processes. After incision has been made into the gland it should be kept open by gauze for some time until all of the broken-down material has been discharged.

President's Address.—Dr. John A. Wyeth of New York, the President of the Association, then delivered the Annual Address, the subject of which was "Comments on Some New Surgical Methods." With regard to medullary narcosis Dr. Wyeth is of the opinion that it has come to stay and will form a useful procedure for modern surgery. When patients have affections of the kidneys that contra-indicate the use of ether, the injection of a fifth of a grain of cocaine into the spinal cord will secure the necessary anesthesia. In obstetrics, also, this method has been found useful, though the use of chloroform has been so safe in midwifery that any other anesthetic method seems superfluous.

Cocaine can be sterilized by being placed in a test-tube and plunging the latter into boiling water. This does not destroy the anesthetic power of the cocaine. The needle is inserted between the fourth and fifth lumbar vertebræ and is pushed inward and upward. In especially sensitive patients local anesthesia by cocaine or eucaine may be employed for the cutaneous and immediately underlying tissues. About as many minims of the cerebro-spinal fluid should be allowed to escape as are to be injected of cocaine

solution; that is usually about ten drops. The injection should be made slowly and the insertion of the needle into the meninges should also be made slowly. In an old case of Pott's disease in which the lumbar vertebræ were soldered together, Dr. Wyeth has succeeded in securing spinal anesthesia by injection between the tenth and eleventh dorsal vertebræ.

Occlusion of Carotids for Neoplasms.—Dr. Wyeth has been very much interested in the method of treatment for inoperable malignant tumors of the larynx and pharynx by cutting off their blood-supply. This is done by tying the carotid on the affected side. Dr. Wyeth has experimented on animals with the hope of finding some substance which, when injected into the vessels, would bring about their occlusion. Alcohol did not produce closure of the vessels. Melted paraffin proved very satisfactory and was associated with no annoying complications, such as gangrene. Boiling hot water causes clotting where injected and closure of the vessels, but it is followed by gangrene.

Boiling Water as Surgical Aid.—As the result of his experiments Dr. Wyeth resolved to use boiling water for the obliteration of a very disfiguring nevus of the lip in a young woman. A previous attempt at its removal by the knife led to serious bleeding. Part of the vascular growth was injected with hot water with subsequent atrophy that was very promising. Three large syringefuls were then injected into various parts of the growth with the result that it all atrophied. Pressure was exerted all around the growth during the injection to prevent clots being carried into the general circulation. The tumors continued to atrophy for some time after the operation and the patient now considers herself cured. The disfigurement is entirely gone.

Perineal Prostatectomy.—Dr. Wyeth considers that the development of the operation of prostatectomy is due to American surgery. Perineal prostatectomy, wherever possible, remains the operation of choice. The death-rate of this operation has decreased very materially of late years, owing to the skill of surgeons and the better technic. The progress in this special department of surgery represents some of the best work done during the last ten years.

Ovariotomy for Mammary Cancer.—Beetson, an English surgeon, removed the ovaries in a case of inoperable malignant disease of the breast. The mammary tumor decreased in size after the ovariotomy and the relief proved permanent. This operation has now been done a number of times, and in some cases at least has proved life-saving or has prolonged life and ameliorated symptoms. Just what cases it is best suited for has not yet been determined. Inoperable mammary cancer is such a hopeless condition that a simple non-dangerous procedure like this must be tried for its possible curative effect in every case.

Iodophilia.—Dr. Richard C. Cabot of Boston described this phenomenon, the occurrence of brownish granules in the white blood-cells when the blood is mixed with iodine and viewed under the microscope. The technic of the production of the iodophilic reaction is extremely simple. A drop of a mixture containing one part of iodine, three parts of potassium iodide and 100 parts of water with sufficient gum Arabic to make the solution mucilaginous is placed on a microscopical slide. Over this a cover-glass with an ordinary blood-smear as prepared for microscopical purposes is placed. Within a few seconds the iodophilic reaction can be seen if it occurs. The occurrence of this reaction in the white blood-cells used to be considered indicative of glycogen. Pure glycogen, however, dissolves in a solution of this kind and so it is not a glycogen reaction, though we do not as yet know just what causes it. It is nearly like the reaction that occurs in tissues where amyloid degeneration is present. All that can be said is that it is an iodine reaction. These are rather wide, but are definite enough to give valuable information. In general it may be said that the iodophilic reaction occurs in anemia, suppuration gangrene, or toxemia. Possibly all the conditions mentioned might be included under the single word toxemia. In brief the reaction tells us whether a patient is sick or not. This is important because, while there may be severe subjective symptoms, there may be no serious pathological conditions present. Our more exact methods of diagnosis are mainly for this purpose. We know that if a febrile temperature or albuminuria is present our patient has a serious condition. For a time it was considered that iodophilia, like leucocytosis in acute cases, meant pus. In connection with other symptoms it may be useful in the diagnosis of the development of purulent conditions, but alone it has not such special significance.

Practical Value.—Dr. Cabot related some cases in which iodophilia was of practical value. In a case admitted to the Massachusetts General Hospital, there was some tenderness of the abdomen, some pain, marked prostration and a tendency to collapse in an extremely anxious patient. The symptoms were very indefinite and the diagnosis seemed to lie between abdominal obstruction, pancreatitis, or peritonitis. With a low leucocytosis the iodophilic reaction was marked. The suggested diagnosis was peritonitis and the operation proved its correctness. In difficult appendicitis cases, the reaction is always useful, its presence being significant of a serious condition. For the differential diagnosis of serous or purulent empyema, iodophilia is almost pathognomonic.

Leucocytosis and Iodophilia.—Two years ago Dr. Cabot thought that iodophilia and leucocytosis went together. Now he knows that one may be present without the other and that this peculiarity may be of diagnostic significance. In two cases of extra-uterine pregnancy, for instance, there was a leucocytosis of over 20,000. This with the pain and other symptoms would

almost surely suggest the presence of pus. Iodophilia, however, was negative and the condition found was non-purulent. In a recent case there was pain in the shin-bone and the X-rays showed a shadow on the plate. The iodophilia was negative, showing that there was no pus, and at operation an exostosis was found. Iodophilia is never present in rheumatism and in a recent supposed rheumatic case where the reaction was positive the autopsy showed a pyemic condition of the joint.

The Laboratory in Surgery.—Dr. Simon Flexner of Philadelphia said that if the true value of the laboratory is recognized, its financial support will be insured. In order to secure this, however, it must be well managed. The laboratory is no longer a merely theoretic, but a thoroughly practical institution. The study of the edge of a malignant growth, for instance, may show that there are malignant elements at this point and indicate a certain return of the tumor. In certain neoplasms the morphology of a tumor may show to the trained microscopist that it is secondary and not primary and the original malignant neoplasm may prove to be in the prostate, in the nose, or in some other organ. In not a few cases, staphylococci and in rare cases even streptococci have been found in the blood. The significance of the presence of these bacteria is not yet entirely made out, but we know now that they do not necessarily imply an unfavorable prognosis. Patients may recover if the original focus of infection is in a position where it can be readily evacuated. Presence of bacteria in the blood means nothing unless they grow there. Typhoid bacilli frequently occur in the blood, but only rarely grow in it. In cases of varix the microscopical examination of removed blood-vessels showed the filarial origin of the condition in a case examined by Opie and in a recent case of Flexner's own. Leucocytosis, of course, is important in showing the presence of pus, though it fails to occur in intense cases of purulent generalized infection. Eosinophilia has come to be a recognized condition in trichiniasis and a pathognomonic sign of the affection. We are evidently only on the threshold of the progressive usefulness of the laboratory in practical medicine and surgery.

The Laboratory and Recent Modifications of Surgery.—Dr. Joseph D. Bryant of New York detailed some of his experiences as house surgeon at Bellevue thirty years ago, in order to bring out the difference between the methods of then and now and the improvements consequent upon the extended use of the laboratory in surgery. At that time many cases in the hospital for surgical reasons developed erysipelas. Pyemia was frequent. Carbolic acid, opium and balsam of Peru were the drugs most commonly prescribed, but anything like a hint of the principles of antisepsis was unknown and asepsis was unthought of. In six months of the surgical service nine patients died from pyemia as the result of compound fracture and amputation. In Dr. Bryant's eighteen years' experience as a visiting surgeon there have not been an equal number. Antiseptics were used blindly and inefficiently. Dr. Bryant still has the notes of some cases and their treatment. In 1871 he personally applied Lister's lac dressing. This was the first time it was ever applied in America. Lac plaster was made of carbolic acid and shellac and was poured upon the wound with the idea of acting as a protective; any idea of true surgical cleanliness was not yet in surgical minds.

Surgical Hesitation.—The marked feature of the surgical service was the hesitation of surgeons to interfere in many cases that are now operated upon at once. Dr. Bryant remembers a case of rupture of the bladder into the peritoneum. The bladder was drained by a catheter, but nothing further was done and the patient died, as might have been expected. The expectant plan of treatment was the rule then, and the mortality of such accidents was 95 per cent. Now over 60 per cent. are rescued. A patient suffering from extraperitoneal rupture of the bladder was admitted to the hospital, but nothing was done to repair the viscus. Abscesses were opened when they formed. A constant state of suppuration proved exhausting to the patient, and at the end of six weeks death ensued. These wounds were treated absolutely expectantly, surgeons being very timorous about opening the peritoneal cavity. The patient was put under the influence of opium and an expectant attitude maintained. Dr. Bryant recalled a case in which bloody urine was a feature, but the only surgical interference attempted was drainage of the bladder by a catheter. Needless to say most of the cases perished. The mortality was over 90 per cent. Now over 30 per cent. recover under surgical treatment.

Intestinal Obstruction.—Dr. Bryant recalls a consultation of the visiting surgical staff over a case of peritonitis that had developed as the result of intestinal obstruction. There was a history in the case of no movement of the bowels for seven days. The abdomen had become tender and swollen and the distention had become extreme. Vomiting that finally became fecal in character was established shortly after admission to the hospital. It was not until the fourth day that a consultation was held. Nothing was done as the result of the consultation, and at the autopsy strangulation of the small intestine was found. Thirty to 40 per cent. of such cases are saved now.

The Pneumatic Cabinet in Heart Disease.—Dr. Quimby of New York read a paper on the use of the pneumatic cabinet in the treatment of diseases of the heart. He uses a differentiation of pneumatic pressure in order to relieve many of the symptoms that occur during the course of heart disease. The patients breathe in air at a normal pressure and breathe out air at lessened pressure. The result of this treatment is not only the relief of symptoms, but also a tonic effect is exerted upon the heart that makes the

heart muscle much more capable of performing its work and is almost curative in character. Dr. Quimby exhibited the sygmographic tracings of a series of patients who had been treated by the differential pneumatic pressure method. All of them showed not only that the patients were relieved for the time being from their irregular heart action, but also that at successive séances of the treatment there was progressive improvement. Patients came back in better condition each time and went away still more improved until, finally, the relief afforded amounted, in the patient's mind at least, to a cure. There was during the progress of the treatment a noticeable change in the character of the physical signs of the heart and an evident modification of the valvular lesions in the cases as the result of the mechanical help afforded by the differential pneumatic experience.

Gunshot Wounds of the Hip-joint.—Major Louis A. LaGarde of Washington, D. C., read a paper describing the effects produced upon the hip-joint by the entrance of projectiles of reduced caliber. The old army rifle of the Civil War projected a 40 to 50 caliber bullet that weighed twice as much as the modern bullet of a 26 to 30 caliber. The old bullet was made entirely of lead and was flattened and shattered against hard tissues, making a crushing wound. Injuries of large bones and of large joints were then very serious. Besides, the old bullets were of lower velocity and so made a much less clean-cut wound. The modern bullet revolves on its axis 2,400 times a second at its exit from the rifle, the old bullets revolved only 800 times per second. Besides the smaller size and weight of the modern bullet for carrying purposes they are encased in a steel capsule. If the end of this capsule is filed off, leaving the lead exposed, when the bullet impinges against a hard substance, an explosive effect is produced. Under ordinary circumstances, however, the modern bullet makes a clean small hole through a bone. Dr. LaGarde exhibited some specimens of tibiæ and femora, showing how little splintering effect had been produced by bullets fired from cartridges with limited charges. They make a clean-cut, punched-out wound. Dr. Stevenson of the British Army in South Africa says that he has seen a number of hip-joint bullet-wounds recover without complications and without a sign of pus. There is undoubtedly penetration of the joint tissue, and yet in many cases the X-rays show nothing and they proceed to get well. During his experience in South Africa Dr. Stevenson has seen only three amputations for wounds of the hip-joint and only one of these resulted in death. It is evident, then, that the modern small-caliber bullet, while not intended originally to reduce the amount of suffering or injury produced, but adopted because of its better carrying power, is about to make the surgery of war easier and the danger of bullet-wounds in bones much less than before.

Asthma Not a Nervous Disease.—Dr. G. N. Jack of Depew, N. Y., read a paper in which he argued that asthma was due not to a nervous condition in the lungs themselves, nor to any reflex nervous condition outside of the lungs, but to instability of the blood. This instability of the blood is mainly due to intestinal toxemia. Absorption of illy-digested material from the gastro-intestinal tract has its effect upon the delicate lung-tissue and this gives rise to the asthma.

Diathesis in Asthma.—Asthma occurs with special frequency in patients suffering from a lymphatic diathesis. There will often be found in these cases an asthmatic lymphocytosis. The sudden death that occurs in the lymphatic diathesis is often due to a drowning of the patient in his own secretions. The cyanosis and excessive secretion that sometimes occur spasmodically even in young persons may be relieved by Epsom salts, which clear the blood of excrementitious material and so relieve the tendency to pulmonary spasm.

Vasomotor Paresis as Cause of Asthma.—In the discussion of Dr. Jack's paper, Dr. George Cott of Buffalo said that the most satisfactory explanation of the cause of asthma is that it is due to a vasomotor paresis. The reflexes that arouse this palsy of pulmonary terminal filaments need not necessarily be situated in the lungs or even in the respiratory tract, but may even come from the intestinal mucous membrane. Improvement of digestion, then, will lessen the number of attacks of asthma or cure the disease. This does not prove, however, that a better condition of the blood relieves asthma, because the cause of the asthma is in the blood. Improvement in the patient's condition causes less irritability of nerves and so lessens asthmatic attacks.

FOURTH DAY—OCTOBER 24TH.

Differential Leucocyte-count.—Dr. William G. LeBoutillier of New York City read a paper on the differential leucocyte-count in fractures. The fact that the bone-marrow is a blood-making organ might lead to the thought that there would be some marked differences in the differential leucocyte-count after fractures. Dr. LeBoutillier has investigated the question and finds that there is no special alteration in the proportion of various kinds of leucocytes during convalescence from fracture. There was a distinct rise in temperature after even simple fracture that continued as long as ten days to two weeks after the fracture and amounted to several degrees. Only in two cases were there marked differences in the leucocyte proportions and these were alcoholic cases in which sepsis and death followed. Myelocytes were more frequent than normal, but this was of no special clinical value.

Malposition of the Gall-Bladder.—Dr. E. D. Ferguson of Troy described some anomalous positions of the gall-bladder that have especial interests now because of the frequency of opera-

tions in the biliary tract. While the gall-bladder is said to be situated always in definite opposition between the right and left lobes of the liver, the complicated developmental processes of this portion of the body might be expected to bring about the displacement of it not infrequently. While much has been said of the burying of the gall-bladder in the midst of adhesions, very little has been written about its possible anomalous position. The liver develops from two buds of embryonic tissue that gradually grow together, and between them the gall-tract is formed to find its proper place beneath the two lobes of the liver after their union. The simultaneous development of the omentum and peritoneum at this part makes the problem of ultimate position an intricate one with many possible disturbing factors.

Extraperitoneal Gall-bladder.—Dr. Ferguson described three cases in at least two of which the gall-bladder seemed to occupy a position behind the liver and outside of the peritoneal cavity. In one case the gall-bladder lay distinctly behind the liver and was extremely difficult to get at. In another case the gall-bladder formed a rather large sausage-like tumor behind the colon in the retroperitoneal space. It is evident that the study of anomalies of the gall-bladder will be of immense practical importance and that all observations in this matter should be carefully noted. As for the appendix, surgical interest will doubtless bring us the realization that there are a number of positions in which the gall-bladder may be as the result of embryological peculiarities, and that the surgeon must be prepared for anomalous symptoms.

Prostatic Obstruction.—Dr. J. W. S. Gouley of New York read a paper on the treatment of prostatic obstruction to urination by enucleation of the diseased part. He said that the operation for relief of prostatic obstruction should not be too long delayed. The operation should not be called prostatectomy, which is a wrong term, because the whole of the prostatic structure is never removed, but only the obstructing parts enucleated. Dr. Gouley exhibited a new form of prostatic retractor by which the enucleation of obstructing prostatic tissue would be facilitated.

Selection of Operation.—Dr. Parker Syms of New York said that we owe more to Dr. Gouley in the development of the proper surgical treatment of prostatic obstruction than to any one else in this country. The mortality was high at first, because operative interference was suggested only in the case of feeble old men, in whom it was proposed as a last resort. Dr. Syms considers that the perineal route is less dangerous than the suprapubic method, because it provides a simple straight wound and drainage by gravity. Dr. Syms presented a rubber bulb and tube retractor, by which the bladder can be pulled down and the prostate made more accessible. With this instrument he has done prostatic enucleation in twelve cases without a death.

Dr. Eugene Fuller of New York said that the operation in any given case must be selected according to the individual peculiarities of the case. At tmes undoubtedly the suprapubic route is the best. If the prostate is very large, weighing over half a pound, it is an extremely difficult matter to remove it through a perineal incision; if, as not infrequently happens in old prostatic cases, there is a large hard stone present, the suprapubic route is the operation of choice. In one such case seen recently Dr. Fuller has not hesitated to do a second suprapubic operation in order to remove a stone when necessary.

Vesical Emergencies.—The most important of these, according to Dr. Eugene Fuller, are due to retention of urine. There are two classes of cases—those in which catheterization is possible and those in which it is not. It must be borne in mind that distention causes spasm and tenesmus, and there must be no forcible effort at catheterization. A gum elastic stiffened catheter, olive-pointed, is the best for these cases. Where this will not pass a filiform bougie should be employed. As the opening in the stricture of the urethra may not be exactly in the center, this should be bent at various angles. If a filiform passes, the urine will usually escape alongside it and the patient may be put to bed and the bladder distention will relieve itself. If not a tunnel cavity can be employed. Where this fails suprapubic aspiration should be employed. After relief of bladder distention by aspiration a catheter may be passed.

Uterine Prolapse.—Dr. Frederick Holme Wiggin said that this is really a hernia and, in treating it, the hernial sac should be obliterated. For this a laparotomy should be done in the Trendelenburg position and purse-string sutures inserted in the uterus and the broad ligaments so as to give the uterus a new insertion near the base of the ligament. Patients should be kept in bed for four or five weeks, at the end of which time the vaginal redundancy will have disappeared and the muscle of the pelvic floor may then be brought together. Dr. Wiggin has used this method with satisfaction in patients from seventy to eighty years of age.

Typhoid Cholecystitis.—Dr. Charles G. Stockton of Buffalo detailed some cases in which an inflammation of the gall-bladder occurred as the result of infection with typhoid bacilli. In the first of the cases the symptoms referable to the gall-bladder developed 100 days after the beginning of the attack of typhoid fever. The typhoid had run an anomalous course with relapses; the first symptom of the attack were severe epigastric pains that compelled the patient to go to bed. These were localized in the right hypochondriac region. The abdomen was tender, especially in the upper part. The gall-bladder was not palpable. The temperature was 104° F. and the pulse 120. The patient had two severe chills the first day. Intense cyanosis developed, involving the lips and the nails. The stools were bile-stained and contained mucus.

During the course of the attack herpes zoster developed on the right arm. The Widal reaction, which had only been dubious before, then became positive. The attack was followed by the passage of a gall-stone.

Characteristic Case.—This patient was taken with pain in the right hypochondriac region that radiated upward toward the shoulder. When put to bed the pain subsided, but recurred when she went to work. There was tenderness over the liver. The Widal reaction was doubtful, the blood-counts showed a leucocytosis of 18,000. On the seventeenth day after the beginning of the attack jaundice developed. This came and went in a remarkable way. The irregular temperature course led to the conclusion that pus was present. The gall-bladder was opened by Dr. Roswell Park, but contained only viscid mucus. The gall-bladder was surrounded by recent adhesions. After the operation the temperature at once declined and cultures taken from the contents of the gall-bladder showed only the presence of typhoid bacilli. In a third case a husband had died with typhoid and four days after his death the wife was stricken with backache and headache and a temperature of 104° F. The Widal reaction showed a loss of motion in the bacilli, but very poor clumping. Nearly two months pased before the reaction became positive. On the twentieth day the patient developed a severe chill with some jaundice. An attack resembling gall-stone colic occurred and a gall-stone was passed. Leucocytosis was also present in this case. In these cases, except the first one, which developed very late, the average time of development was about the twentieth day; this is also the average time of development in a large series of cases.

Pain in Cholecystitis.—The presence of pain with infection of the gall-bladder does not necessarily mean the presence of calculus. Dr. Ferguson of Troy said that Kehr, the German authority on gall-stone surgery, believes that cholecystitis causes spasm and consequent pain without the presence of stone. Dr. Stockton in closing the discussion said that Naunyn, the great German medical authority on biliary conditions, considers that it is the inflammation set up by the stone rather than the stone itself that causes the pain. He also says that cholecystitis is the mother of gall-stones.

Rheumatism versus Consumption.—Dr. Thomas F. Reilly of New York read a paper in which he discussed the protection afforded by the gouty or rheumatic diathesis against pulmonary tuberculosis. Nearly a century ago Louis, the distinguished French medical authority, believed in the opposition of the two conditions. Rokitansky at the middle of the century seemed certain of the same opinion. There is a certain tendency to fibroid conditions associated with the gouty and rheumatic diathesis that is strongly opposed to the development of tuberculous processes. In over 100 cases of tuberculosis careful examination of the history showed that, notwithstanding the fact that most of the patients were of the poorer class, had been exposed to the elements and to the inclemencies of the weather and had abused alcohol, only two per cent. of them had ever suffered from rheumatic symptoms. Other observers have called attention to this condition. Of late injections of urea have been employed with claims of good results as in pulmonary phthisis. The principle would seem to be that an excess of the products which cause rheumatic symptoms would be preventive or curative of tuberculous disease. Dr. Reilly called attention to the fact also that skin diseases usually considered to be associated with the rheumatic diathesis do not occur in phthisis.

Resection of Cervical Sympathetic for Glaucoma.—Dr. Wilbur B. Marple of New York gave the present status of this operation for glaucoma. In from 10 to 25 per cent. of glaucomatous cases no improvement is brought about by iridectomy. These cases go on to blindness in the midst of pain and intense discomfort. In 1896 experiments on animals showed that the section of the cervical sympathetic caused a decrease of intra-ocular tension with a smaller pupil. It was not until three years later however, that this fact was applied to medical practice. There was fear that section of the cervical sympathetic would cause trophic lesions in the eye and the side of the head.

Present Statistics.—Last year at the International Congress for Ophthalmology 74 cases of sympathectomy for glaucoma were reported. To these Dr. Marple adds 13 cases. Unfortunately, many of the reports of success in the operation come too soon after its execution to give any idea of its ultimate success. The disease is essentially chronic and in some sympathetic resection is followed by improvement, yet the improvement is not permanent. Up to this time we are not sure in what cases sympathectomy is indicated, or in what cases permanent good results can be expected. When excavation of the papilla with atrophy of the optic nerve has taken place little improvement can be looked for. Meantime we must wait and sift cases.

Cervical Resection.—Dr. James J. Walsh of New York said that, in a recent communication from Professor Jonnesco, that surgeon stated that cases operated on by this method for glaucoma in 1897 had retained the improvement that came after the operation. In Professor Jonnesco's hands the operation has been useful not only for glaucoma, but also for exophthalmic goiter. In cases where the exophthalmos is very marked and there is danger of loss of the eye from failure of the lids to cover the protruded globe, cervical sympathectomy saves the sight, the exophthalmos grows less, the goiter decreases and the rapid heart action is diminished. in closing the discussion, Dr. Marple said that Professor Jonnesco's cases are reported entirely too meagerly to enable us to judge, either of the conditions existing before or of the improvement that took place or of its permanency.